

Find 1935

SELECT 1980 MAR 21 1980 C. Techi

C Technical Report 493
Volume 2

OMEGA HAWAII ANTENNA SYSTEM:
MODIFICATION AND VALIDATION TESTS.

Volume 2. Data Sheets

/ JC Hanselman Megatek Corp.

//\19 Octeber 1979

Final Report.

Prepared for US Coast Guard

Approved for public release; distribution unlimited

NAVAL OCEAN SYSTEMS CENTER SAN DIEGO, CALIFORNIA 92152

30 3 20 086

11:11:1



NAVAL OCEAN SYSTEMS CENTER, SAN DIEGO, CA 92152

AN ACTIVITY OF THE NAVAL MATERIAL COMMAND

SL GUILLE, CAPT, USN

Commander

HL BLOOD

Technical Director

ADMINISTRATIVE INFORMATION

Electronic measurements were performed on the Hawaii OMEGA Antenna System during the months of May and June 1978 and March and May 1979. The work was performed under NOSC project MP01538B10 with Megatek as contractor under NOSC Technical Agreements 005, 025, and 030, Contract N00123-78-C-0043.

Volume 1 of NOSC TR 493 is the report proper. Volume 2 contains data sheets.

Released by JH Richter, Head Electromagnetic Propagation Division

Under authority of JD Hightower, Head Environmental Sciences Department

UNCLASSIFIED

REPORT DOCUMENTA	READ INSTRUCTIONS BEFORE COMPLETING FORM	
REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
NOSC Technical Report 493 (TR 493)		
TITLE (and Subtitle)		5. TYPE OF REPORT & PERIOD COVERE
OMEGA HAWAII ANTENNA SYSTEM: AND VALIDATION TESTS (TWO VOL	LIMEC)	Final
Volume 2	A O & CALL	6. PERFORMING ORG, REPORT NUMBER
AUTHOR(a)		8. CONTRACT OR GRANT NUMBER(#)
JC Hanselman (Megatek Corporation)		N00123-78-C-0043
PERFORMING ORGANIZATION NAME AND AD	DORESS	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
Naval Ocean Systems Center San Diego, CA 92152	Megatek Corporation V San Diego, CA 92106	NOSC MP01538B10
. CONTROLLING OFFICE NAME AND ADDRES		12. REPORT DATE
US Coast Guard		19 October 1979
Washington, DC 20591		13. NUMBER OF PAGES
. MONITORING AGENCY NAME & ADDRESS(IF	different from Controlling Office)	15. SECURITY CLASS. (of this report)
		Unclassified
		154. DECLASSIFICATION DOWNGRADING
. DISTRIBUTION STATEMENT (of this Report)		
Approved for public release; distribution	unlimited	
.,		

- 17. DISTRIBUTION STATEMENT (of the obstract entered in Block 20, if different from Report)
- 18. SUPPLEMENTARY NOTES

Volume 1 is the report proper. Volume 2 contains data sheets.

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Omega vlf navigation system

Radiation resistance - efficiency

Antennas configuration

Monopole antenna

Measurements electrical

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Electronic measurements were performed on the Hawaii Omega Antenna System during the months of May and June 1978 and March and May 1979. The work was performed under NOSC project MP01538B10 with Megatek as contractor. The electrical height of the antenna is 169 metres for all frequencies. The station can easily radiate more than 10 kW on all frequencies. There is no measurable deviation from omnidirectional radiation due to the proximity of the Haiku Valley walls to the south, west and north of the antenna. The apparent capacitance of the antenna was measured. Also, the inductance of the spare variometer and its variation was measured. From these preliminary measurements, the optimum location of the 11.050 kHz helix

DD 1 JAN 73 1473

EDITION OF 1 NOV 65 IS ORSOLETE 5/N 0102-LF-014-6601

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Date Bries

UNCLASSIFIED

CONTENTS ;

INTRODUCTION . . . page 1

DATA SHEET 1: APPARENT CAPACITANCE . . . DS 1-1 through DS 1-5

DATA SHEET 2: ANTENNA SYSTEM RESISTANCE . . . DS 2-1 through DS 2-18

DATA SHEET 3: RADIO FIELD INTENSITY - ANTENNA . . (not used in this report)

DATA SHEET 4: RADIO FIELD INTENSITY - SITE LOCATION . . . (not used in this report)

DATA SHEET 5: RADIO FIELD INTENSITY - MEASUREMENTS . . . DS 5-1 through DS 5-45

DATA SHEET 6: RADIO FIELD INTENSITY - CALCULATIONS . . . DS 6-1 through $\frac{1}{100}$ DS 6-38

1	ion For			/
NTIS				
DDC TA	_			
Unanno				
Ju.tif	idution	·		
Ey				
11:54.01	1911 (P. 1911)	<u></u>		
/#c13	-1411517	•_(*;]e s	
	Availe			
Dist	spec	lal		
~				
I		1		
111				

INTRODUCTION

During the performance of modification and validation tests at OMEGA Hawaii, data and all pertinent information collected were recorded on appropriate data sheets. This information was later transcribed as necessary to data sheets designed to facilitate analysis and computation of desired operating parameters.

These data and computation sheets are presented herewith in rough form for future reference.

OME	GA HAWAI		,	31 NAY 1978	<u> </u>
				Date	
1.	Frequency			10,200	_Hz.
2.	Decade Capacitor				
	Indicated Reading:	0.00	1.5	<u>/</u> μF.	
	Corrected Values :	0.0X		0.040049	_μF.
	(Table)	0.00X		0.005009	μF.
		0.000X		0.000101	μF.
	Residual Capacitance	: :	Add_	0.000048	_uF.
	Total Decade Capa	acitance:		0.04.5207	_uF.
3.	Variable Capacitor: (Table)			0.000551	_µF.
4.	Wiring Capacitance	(if Measurab)	le) Add_	0.000050	μF.
5.	Apparent Capacitance (Antenna only)	e, C _{app} .		0.045808	µF.
6.	Exit Bushing Capacit	tance	Add_	0.000289	_uF.
7.	Apparent Capacitance (Includes Exit Bush	e, C _{app} .		0.046097	μF.
8.	Reactance, X _C (Calcul	lated)	-	338.5	Ohms
3	TRIALS; VA	RIABLE (AP	CORRECT	TICK
		7. 3		.548.5	
		7.5		+ 2.14	<u> </u>
		0.7		-550.6	4
	X = 54	18.5		551	
	-	DS 1-1			

OME	GA HANAII	31 MAY 1978
		Date
1.	Frequency	//,333,3 Hz.
2.	Decade Capacitor	
	Indicated Reading: 0.044	<u>· 2</u> μF.
	Corrected Values : 0.0X	0.040049 uf.
	(Table) <u>0.00X</u>	0.006010 uf.
	0.000X	0.000199 µF.
	Residual Capacitance:	0.000048 uf.
	Total Decade Capacitance:	0.046306 µF.
3.	Variable Capacitor: (Table)	<u>0.000627</u> μF.
4.	Wiring Capacitance (if Measurable)	0.000050 uf.
5.	Apparent Capacitance, C _{app} . (Antenna only)	0.046983 µF.
6.	Exit Bushing Capacitance Add	<u>0.000289</u> μF.
7.	Apparent Capacitance, Capp. (Includes Exit Bushing)	0.047272 uf.
8.	Reactance, X _C (Calculated)	297.1 Ohms
3	TRIALS; VARIABLE CA	P. CORRECTION
	622.0	624.57
	628.3	+ 2.06
	623.4	626.63
	$\overline{X} = \overline{624.57}$	627
	DS 1-2	

OME	GA HAWAII			31 MAY 1978	_
				Date	
1.	Frequency			11,550	_Hz.
2.	Decade Capacitor				
	Indicated Reading:	0.0	46	9_ µF.	
	Corrected Values :	<u>0.0X</u>		0.040049	_μ F .
	(Table)	0.00X		0.006010	_μ F .
		0.000X		0.000877	_μF.
	Residual Capacitano	e:	Add	0.00048	_μF.
	Total Decade Cap	acitance:	_	0.047004	μF.
3.	Variable Capacitor: (Table)			0.000161	_μF.
4.	Wiring Capacitance	(if Measurab	le) Add_	0.00050	_μ F .
5.	Apparent Capacitano (Antenna only)	e, C _{app.}		0.047215	_μF.
6.	Exit Bushing Capaci	tance	Add_	0.000289	_µF.
7.	Apparent Capacitano (Includes Exit Bush	e, ^C app.		0.047.504	_μF.
8.	Reactance, X _C (Calcu	lated)	-	290,1	_0hm
3 -	TRIALS; VARI	ABLE CA	\mathcal{P} .	CORRECTION	/
	/.4	57.4		160,33	
	14	5./		+0.81	•
	1.5	8 . 5		16.1.14	-
	X = 14.	0.33		161	

OM	GA HAWAII		31 MAY 1978	<u>) </u>
			Date	
1.	Frequency		11,800	Hz.
2.	Decade Capacitor			
	Indicated Reading:	0 .047	<u>2</u> μF.	
	Corrected Values :	0.0X	0.040049	μ F .
	(Table)	0.00X	0.007005	μF.
		0.000X	0.000199	μF.
	Residual Capacitano	ce: Add	0.000048	_μF.
	Total Decade Cap	pacitance:	0.047301	μF.
3.	Variable Capacitor: (Table)	:	0.000/65	_μF.
4.	Wiring Capacitance	(if Measurable) Add		μ F .
5.	Apparent Capacitano (Antenna only)	ce, C _{app} .	0.047.516	μF.
6.	Exit Bushing Capaci	tance Add	0.000289	μF.
7.	Apparent Capacitano (Includes Exit Bush	ce, C _{app} .	0.047805	μF.
8.	Reactance, X _C (Calcu	lated)	282.1	Ohms
3	TRIALS; VARI	ABLE CAP.	CORRECTION)
	14	67.7	163.93	
	10	4.2	+0.82	
	/ 5	59.9	+64.75	
	_	3, 9.3 DS 1-4	145	

OME	GA HAWA	11	31 MAY 1978
			Date
1.	Frequency		13, 600 Hz.
2.	Decade Capacitor		
	Indicated Reading:	<u> </u>	749.5 uf.
	Corrected Values :	0.0X	0.040099 uF.
	(Table)	0.00X	<u>0. σς 9ς σ4</u> μF.
		0.000X	0.000501 uF.
	Residual Capacitano	e:	<u>0. CCC 48</u> μF.
	Total Decade Cap	acitance:	0.049602 µF.
3.	Variable Capacitor: (Table)		0.000316 uf.
4.	Wiring Capacitance	(if Measurat	ble) <u>0 . CCCC.5C</u> μF.
5.	Apparent Capacitano (Antenna only)	e, C _{app} .	<u>0.049968</u> μF.
6.	Exit Bushing Capaci	tance	<u>0.000289</u> μF.
7.	Apparent Capacitano (Includes Exit Bush	e, C _{app} .	0.050257 uf.
8.	Reactance, X _C (Calcu	lated)	232.9 Ohr
3	TRIALS VA	RIABLE	CAP. CORRECTION
		314,9	315.17
	3	17.4	+1.10
	5	313.2	316,27
	$\overline{X} = \overline{3}$	1.5.17 DS 1-5	316
		11\ 1-5	

ANTENNA SYSTEM RESISTANCE

	HAWA!!		-	5 J	<i>JNE 19</i> Date	78
1.	Frequency			10,	200	Hertz
2.	Fixed Resistor,	(Z) <u>O</u> .	22 uH		1.0	<u>01</u> 0hms
3.	Measurements.	No N	'015E.			
	N (E)		v.* N ₁	(E ₁)	V*	
	E + N	E ₁ + N ₁	$\sqrt{\left(E + N\right)^2 - 1}$	2	E ₁ 2 2	Ras
Tri	al		$\sqrt{(E + N)^2 - 1}$	$\sqrt{(E_1 + I)}$	N ₁) - N ₁	(ohms)
1.		•	7.901	<u>3</u> .	323	0.727
2.			8.408		531	0.725
3.		•	8.206		448	0.725
4.		·	7.723	<u>3</u> .	207	0.711
5.		·	8.249	<u>3</u> .	413	0.707
6.		•	7.477	<u>3.</u>	082	0.702
7.		·	8.590	<u>3</u> .	580	0.715
8.			8.718	<u>3</u> .	615	0.709
9.		·	8.650	3.	644	0.729
١٥.		•	8.650	<u>3</u> .	635	0.726
	(E) is noise mea (E ₁) is noise m				R _s (Mean)	0.718

ANTENNA SYSTEM RESISTANCE

	HAWA// Location	-	5 Ju	NE / Date	978
1.	Frequency	-	11,0	50	Hertz
2.	Fixed Resistor, (Z) D. 22	Hu S		1.00	O/ Ohms
3.	Measurements. No No	DISE.			
	N (E) V.*	N_1	(E ₁)	v*	
	$E + N$ $E_1 + N_1$	$\frac{E}{\left(E+N\right)^2-N}$	$\sqrt{(E_1 + N)}$	$\frac{E_1}{\left(1\right)^2 - N_1^2}$	R _{as}
Tr	ial V		·		
1.		8.249	<u>3</u>	540	0.753
2.		8.334	<u>3</u> . <u>.</u>	553	0.744
3.		8.160	3.	487	0.747
4.		8.64	<u>3</u>	712	0.755
5.		8.345		598	0.759
6.		8.42	_	620	0.755
7.		8. 128		473	0.747
		8. 191		505	0.749
8.		8.322		563	0. 750
				610	0.747
10.		8.44	e <u>J</u> .	610	<u>v</u>
⋆Ņ N	(E) is noise measured at points (E) is noise measured at points (E) is noise measured at p	nt E oint E _l		R _{as} (Mean)	0.751

ANTENNA SYSTEM RESISTANCE

	HAWAII Location	_	5 JUNE Date	1978		
1.	Frequency	_	//, 333	Hertz		
2.	Fixed Resistor, (Z) O. Z	2.2 µH	1.0	001 Ohms		
3.	3. Measurements. No NOISE.					
	N (E) V.* N ₁ (E ₁) V*					
	$E + N$ $E_1 + N_1$	Ε	E ₁	R _{as}		
Tri	$E + N$ $E_1 + N_1$	$\sqrt{\left(E + N\right)^2 - N^2}$	$\sqrt{(E_1 + N_1)^2 - N_1^2}$	(ohms)		
1.		8.957	4.876	1.196		
2.			5.221	1.212		
3.		9.146	4.569	0.999		
4.	JUMPER ACROSS	RELAY.				
5.		8.914	4.034	0.828		
6.	_	9.051	4.074	0.819		
7.	REMOVED JUM	PER.	-	·		
8.		9.642	4.830	1.005		
9.		·	'	'		
10.			'			
N ;	(E) is noise measured at point (E_1) is noise measured at p $ AD RELAY. $	oint E ₁		·		

ANTENNA SYSTEM RESISTANCE

 $\mathbf{R}_{\mathbf{a}\mathbf{s}}$

	HAWA Locati	on .		5 JUNE 19 Date	778
1.	Frequency			11,800	Hertz
2.	Fixed Resisto	or, (Z) <u>O. Z</u>	2 µН	<u> 1. 0</u>	0 / Ohms
3.	Measurements.				
	N (E)	<u>0.24</u> v.	* N ₁ (E	(1) <u>0.40</u> V*	
	E + N	E ₁ + N ₁	$\frac{E}{\left(E + N\right)^2 - N^2}$	$\sqrt{\left(E_{1} + N_{1}\right)^{2} - N_{1}^{2}}$	R _{as} (ohms)
Tri	ial	`	V(E + N) - N	$V^{(c_1 + \kappa_1)} - \kappa_1$	(Olinis)
1.	8.420	3.631	8.417	3.609	0.751
2.	8.375	3.582	8.372	3.560	0.741
3.	8.436	3.617	8.433	<u>3.595</u>	0.744
4.	8.630	3.699	8.627	3.677	0.744
5.	8.197	3.5/3	8.193	3.490	0.743
6.	8.282	3.557	8.279	3.534	0.746
7.	8.330	3.576	8.327	3.554	0.745
8.	8.119	3.478	8.115	<u>3.455</u>	0.742
9.	8. <u>532</u>	3.671	8.529	3.649	0.749
10.	8.758	3.776	8.755	<u>3.755</u>	0.752
		easured at poi measured at p		R _{as} (Mean)	0.746

ANTENNA SYSTEM RESISTANCE

	HAWA Locat	// ion	_	5 JUNE 1	1978	
1.	Frequency		_	13,600	Hertz	
2.	Fixed Resisto	or, (Z) <u>D. 2</u>	<u>2</u> µН	1.0	00/ 0hms	
3.	Measurements					
	$N(E) 0.15 V.* N_1(E_1) 0.30 V*$					
Tri	E + N	E ₁ + N ₁	$\sqrt{\left(E + N\right)^2 - N^2}$	$\frac{E_{1}}{\sqrt{(E_{1} + N_{1})^{2} - N_{1}^{2}}}$	Ras (ohms)	
1.	8.475	3.705	8.474	3.693	0.713	
2.	7.570	<u>3.295</u>	2.569	3.281	0.766	
3.	8.880	3.870	<u>8.879</u>	3.858	0.769	
4.	9.047	3.950	9.046	<u>3.939</u>	D. 772	
5.	8.445	3.685	8.444	3.673	0.771	
	7.785		7.784	3.392	0.773	
	8.440		8.439	3.668	0.770	
	8.420		8.419	3.643	0.764	
	8.654		8.653	3.748	0.765	
10.	7.984	3.470	<u> 1.983</u>	<u>3.457</u>	0.765	
		measured at poi measured at p		R _{as} (Mean	0.269	

made as a

ANTENNA SYSTEM RESISTANCE

Ras

	HAWAI	/ on		// JUNE Date	1978
1.	Frequency			10,200	
2.	Fixed Resistor	·, (z) <u>O</u>	22 µH		00/ Ohms
3.	Measurements.	No No	ISE.		
	N (E) _		v.* N ₁ (E ₁) V*	
	E + N	E ₁ + N ₁	E 2 2	$\frac{E_1}{\sqrt{\left(E_1 + N_1\right)^2 - N_1}}$	R _{as}
Tri	ia1		$\sqrt{(E + N)^2 - N^2}$	$\sqrt{(E_1 + N_1) - N_1}$	(ohms)
1.		•	8.244	4.733	1.350
2.	•	•	8.986	5.200	1.375
3.	·	•	7.812	4.557	1.402
4.				<u></u>	
5.	·		·	<u> </u>	<u></u>
6.			·'		·
7.				•	<u></u>
8.	<u>'</u>	•		·	 •
9.	 '				·
10.		·	·		 •
	(E) is noise me (E ₁) is noise			R _{as} (Mea	n) <u>/</u> . <u>376</u>

FIRST SERIES. STOPPED TO CLEAN INSULATORS.

ANTENNA SYSTEM RESISTANCE

HAWAII Location		11 JUNE 1	978
1. Frequency	_	13,600	Hertz
2. Fixed Resistor, (Z) <u>O</u> .	22 µH	1.0	00 / Ohms
3. Measurements. No No	ISE		
N (E)	v.* N ₁ (E ₁) V*	
E + N E ₁ + N ₁	$\int_{\sqrt{(E+N)^2-N^2}}^{E}$	$\frac{E_{1}}{\sqrt{(E_{1} + N_{1})^{2} - N_{1}^{2}}}$	R _{as} (ohms)
Trial 1	~	4.150	1.195
2			
3		•	
l			
i			
··			°
•		•	
·		<u></u>	
·			
)			'
PN (E) is noise measured at N_1 (E $_1$) is noise measured at	point E point E ₁	R _{as} (Mean)	

ANTENNA SYSTEM RESISTANCE

 R_{as}

	HAWA/	n		11 JUNE Date	1978
1.	Frequency			10,200	Hertz
2.	Fixed Resistor	·, (z) <u>O</u>	22 uH	1.0	00/ 0hms
3.	Measurements.	NOISE T	OO SMALL.	<0.1% ERR	OR
	N (E) _	0.03	v.* N ₁ (E ₁) <u>0. 08</u> V*	
	E + N	E ₁ + N ₁	E 2 2	$\frac{E_{1}}{\sqrt{(E_{1} + N_{1})^{2} - N_{1}^{2}}}$	Ras
Tri	al		$\sqrt{(E + N)^2 - N^2}$	$\sqrt{(E_1 + N_1)^2 - N_1^2}$	(ohms)
1.		'	7.879	4.647	1.439
2.			8.349	4.998	1.493
3.			7.113	4.247	1.483
4.					1.483
5.			0 -0-	4.653	1.483
6.			·		<u>·</u>
7.	·			 •	·
8.	•			<u>`</u>	·•
9.				 ·	·
10.			•		••
N ₁	(E) is noise me (E ₁) is noise	measured at	oint E point E ₁	R _{as} (Mean) <u>1.476</u>

AFTER CLEANING INSULATORS.

ANTENNA SYSTEM RESISTANCE

Ras

	HAWA!	/ on		11 JUNE Date	1968
1.	Frequency			11,050	Hertz
2.	Fixed Resistor	r, (Z) <u>O</u> .	<i>22</i> µН	1.0	0 / Ohms
3.	Measurements.	Noise To	OO SMALL T	O REGRA	
	N (E)		y.* N ₁ (E ₁) V*	
	E + N	E ₁ + N ₁	E 2 2	$= \frac{E_1}{\sqrt{(E_1 + N_1)^2 - N_1^2}}$	Ras
Tri	ia1		$\sqrt{(E + N)^2 - N^2}$	$\sqrt{(E_1 + N_1)^2 - N_1}$	(ohms)
1.	•	•	8.408	4.725	1.284
			10.019	5.644	1.291
				4.893	1.301
4.			10.416	5.879	1.297
5.			9.651	5.470	1.310
6.					
7.				·	
8.				•	
9.			<u>-</u> -	•	
10.	 ·		· · · · · · · · · · · · · · · · · · ·	•	
N	(E) is noise map (E_1) is noise $ECOND$ S	measured at		R _{as} (Mean	1.297

DS 2-9

AFTER CLEANING INSULATORS.

ANTENNA SYSTEM RESISTANCE

	HAWA			// JUNE /	1978
1.	Frequency			//,333	Hertz
2.	Fixed Resisto	or, (Z) <u>O</u> . <u>Z</u>	2 <u>2</u> µH	_/	<i>OO </i> Ohms
3.	Measurements.	NOISE	VERY SM	ALL.	
	N (E)	v	.* N ₁	(E ₁) v*	
	E + N	E ₁ + N ₁	E 2	$\sqrt{(E_1 + N_1)^2 - N_1}$	Ras
Tri	ial		$\sqrt{(E + N)} - N$	$\sqrt{(E_1 + N_1) - N_1}$	(ohms)
1.	·		10.229	<u>5.923</u>	1.377
2.			7.730	4.480	1.380
3.		<u> </u>	9.521	5.516	1.379
4.	·		10.813	6.275	<u> 1.384</u>
5.			9.996	5.794	1.380
6.	·				•
7.			·		<u> </u>
8.					•
9.	 •		•		<u> </u>
0.		 '			
N ₁	(E) is noise m (E ₁) is noise ECOND	measured at SERIES.	point E _l	R _{as} (Mea ULATORS.	n) <u>/.<i>380</i></u>

ANTENNA SYSTEM RESISTANCE

 $\mathbf{R}_{\mathbf{a}\,\mathbf{s}}$

1.001 Ohms 8 ERROR. 09 V*
Po ERROR.
09V*
$\frac{E_1}{+ N_1)^2 - N_1^2}$ Ras (ohms)
$+ N_1) - N_1$ (ohms)
<u>. 9/3 </u>
5.341 <i>j.319</i>
.698 1.312
5.090 1.305
6.063 <u>1.293</u>
-·
-
_·
-·
<u> </u>

AFTER CLEANING INSULATORS.

ANTENNA SYSTEM RESISTANCE

Ras

	HAWA!!	n	. <u></u>	// JUNE /	9 78
1.	Frequency			13,600	Hertz
2.	Fixed Resistor	·, (Z) <u>O</u>	22 µН	1.0	<u>0</u> 0hms
3.	Measurements.	NOISE S	SMALL. <).1% ERROR.	
	N (E) _	<u>0.08</u> v	N ₁ (E	1) <u>O. /6</u> V*	
Tri	E + N	E ₁ + N ₁	$\sqrt{\left(E + N\right)^2 - N^2}$	$\sqrt{(E_1 + N_1)^2 - N_1^2}$	R _{as}
	'	•	9.296	<u>5.004</u>	1.167
2.			10.089	5.406	1.156
3.			9.153		1.159
4.			11.041	5.923	1.159
5.			8.574	4.585	1.151
6.	·		·	·	·
7.		·		·	
8.	· · · · · · · · · · · · · · · · · · ·		•	 ·	 ·
9.	 •		•	 •	 ·
10.				<u> </u>	
N ₁	(E) is noise me (E_1) is noise ECOND SE	measured at		R _{as} (Mean)	<u> </u>

AFTER CLEANING

INSULATORS.

ANTENNA SYSTEM RESISTANCE

 R_{as}

	HAWA!	/		// JUNE Date	1978
1.	Frequency			10,200	Hertz
2.	Fixed Resisto	r, (Z) <u>O. Z</u>	<u>22</u> μΗ	1.0	10/ Ohms
3.	Measurements.	NOISE TO	00 SMALL	. 60.190 ERI	ZOR.
	N (E)	0.03 V	.* N ₁ (E	E ₁) <u>0.08</u> V*	
	E + N	E ₁ + N ₁	$\sqrt{\left(E + N\right)^2 - N^2}$	$\frac{E_{1}}{\sqrt{(E_{1} + N_{1})^{2} - N_{1}^{2}}}$	R _{as} (ohms)
Tri			V	5.298	1.462
1.			8.926		
2.			10.664	6.218	1.400
3.			<u>8.993</u>	<u>5.248</u>	1.403
4.			<u>8.984</u>	<u>5.248</u>	1.406
5.			10.271	5.999	1.406
6.				·	·
7.	·				·
8.	·	·			
9.		•	•	·	
10.				•	
	(E) is noise m			R (Mean) 1.415

THIRD SERIES

ONE-HALF HOUR AFTER CLEANING INSULATORS.

ANTENNA SYSTEM RESISTANCE

 $\mathbf{R}_{\mathbf{a}\mathbf{s}}$

	HAWA 11			12 JUNE 19	978
1.	Frequency		-	10,200	Hertz
2.	Fixed Resistor	r, (Z) <u>O</u> .	22 uH	1.0	00/ Ohms
3.	Measurements.	No NO	15 E •		
	N (E)	<u> </u>	V.* N ₁	(E ₁) V*	
Tri		E ₁ + N ₁	$\sqrt{\left(E + N\right)^2 - N^2}$	$\frac{\varepsilon_{1}}{\sqrt{(\varepsilon_{1} + N_{1})^{2} - N_{1}^{2}}}$	R _{as} (ohms)
1.		•	10.290	4.950	0.928
2.				4.862	0.939
3.					0.898
4.			10.358	5.007	0.937
5.			2 1	4.136	0.949
6.			 '		
7.	'				
8.			·	··	•
9.			·	 '	'
10.					
*N N 1	(E) is noise me (E ₁) is noise	easured at po measured at	oint E point E _l	R _{as} (Mean)	0.929

ANTENNA SYSTEM RESISTANCE

 R_{as}

<u>-</u>	HAWA Locati	// on	_	12 JUNE Date	1978
1.	Frequency		_	11,050	Hertz
2.	Fixed Resisto	or, (Z) <u>O.2</u>	<u>Z</u> μΗ	1.0	00 / Ohms
3.	Measurements.				
	N (E)	0.05 V.	* N ₁ (E ₁) <u>O. /25</u> V*	
Tri	E + N	E ₁ + N ₁	$\int (E + N)^2 - N^2$	$\frac{E_1}{\sqrt{(E_1 + N_1)^2 - N_1^2}}$	Ras (ohms)
	9.075	4 348	9.075	4.346	0.920
	9.050		9.050	4. 338	0.922
	9.490		9.490	<u>4</u> . <u>553</u>	0.923
	-	4.591	_		0.928
		4.224	_	4.222	0.926
6.			•	<u></u>	•
7.			°	•	·
8.				 •	
9.		•		. —•——	
10.		·		<u>-</u>	
		measured at point measured at point		R _{as} (Mean) <u>0.924</u>

ANTENNA SYSTEM RESISTANCE

 R_{as}

	HAWAII Location	n	-	12 Ju	Date	1978
1.	Frequency			//,33	33	Hertz
2.	Fixed Resistor	, (Z) <u>O</u>	22 µH		1.0	00 / 0hms
3.	Measurements.	No No	ıs€.			
	N (E) _		V.* N ₁	(E ₁)	V*	
Tui		E ₁ + N ₁	$\sqrt{\left(E + N\right)^2 - N}$	$\sqrt{(E_1 + N_1)^2}$	$\left(\frac{1}{1}\right)^2 - N_1^2$	R _{as}
Tri 1.			0.34	,	450	0.900
2.	·				350	-
			0 00-		284	
4.			0 0			
5.	••		8.716		_	0.915
6.	•	·	- •	•		
7.		·	•			
8.	·	•	•			
9.						
10.			. <u> </u>			·
	(E) is noise me (E ₁) is noise			1	R _{as} (Mean	0.911

ANTENNA SYSTEM RESISTANCE

 $\mathbf{R}_{\mathbf{a}\mathbf{s}}$

	HAWA I Locati	on	_	12 JUNE Date	1978
1.	Frequency		_	11,800	Hertz
2.	Fixed Resisto	or, (Z) <u>O.</u> Z	2 µH	<u> </u>	<i>001</i> 0hms
3.	Measurements.				
	N (E)	0.32 V	.* N ₁ (E ₁) <u>O. 48</u> V*	
	E + N	E ₁ + N ₁	$\frac{E}{\sqrt{(E+N)^2-N^2}}$	$\frac{E_1}{\sqrt{(E_1 + N_1)^2 - N_1}}$	Ras (ohms)
Tri	al		V	V. 1	, ,
1.	9.890	4.716	9.885	4.692	0.905
2.	8.905	4.250	8.899	4.223	0.904
3.	9.905	4.727	9.900	4.703	0.906
4.	9.350	4.450	9.345	4. 424	0.900
			9.081		0.900
					•
			•	<u> </u>	•
			•	·	•
10.					······································
			 '	 •	 '
	(E) is noise m (E ₁) is noise			R (Mea	n) 0.903

ANTENNA SYSTEM RESISTANCE

 R_{as}

	HAWA			12 JUNE Date	1978
1.	Frequency			13,600	Hertz
2.	Fixed Resisto	or, (Z) <u>O. 2</u>	2 <u>2</u> µH		<i>OOI</i> Ohms
3.	Measurements.				
	N (E)	<u>0. /5</u> v	.* N ₁	(E ₁) <u>0.30</u> v*	
Tri		E ₁ + N ₁	$\sqrt{\left(E + N\right)^2 - N}$	$\frac{E_1}{\sqrt{(E_1 + N_1)^2 - N_1}}$	Ras (ohms)
	9.278	4.406	9.277	4.396	0.902
	9.916		9.915		
	_	_	9.499		
				4.204	
5.	9.999	4.746	9.998	<u>4.737</u>	0.901
6.	•		·	•	<u> </u>
7.	<u> </u>	•		<u>-</u>	
8.	·		•	<u> </u>	 •
9.				 •	<u>—·—</u>
10.		<u>-</u>	•		 •
	(E) is noise m			R (Mea	n) 0.90/

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: HAWAII SITE NO. C 1 DATE: 24 May 1979								
	_ A. K							
LOOP HEIGHT 6 (MX/ft.) TRIPOD X HELICOPTER (ABOVE: SURFACE - SEXX LEVELX)								
TYPE OF MEASUREMENT: HELICOPTER CAL. X BENCHMARK ROUTINE								
TIME (LOCAL)	FREQUENCY (kHz)	E 9 (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.	
1112	10.20	23.1				1		
1111	13.60	31.5						
1110	11.1/3	27.4						
1109	11.05	26.2						
1108	F _t 11.80	28.2						
1117	10.20	22.0						
1116	13.60	31.3						
1115	11-1/3	27.5						
1114	11.05	26.3						
1114	F _t 11.80	28.3						
1122	10.20	23.0						
1121	13.60	31.4						
1120	11-1/3	27.3						
1119	11.05	26.1						
1118	F _t 11.80	28.2						

COMMENT Not considered for a benchmark because of potential hotel construction.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: HAWAII SITE NO. C 1A DATE: 24 May 1979									
	_ A. K						- 00		
LOOP HEIGHT 6 (MX/ft.) TRIPOD X HELICOPTER (ABOVE: SURFACE - SEXX XIXELX)									
	SUREMENT: H								
TIME (LOCAL)	FREQUENCY (kHz)	E (mV)	HEADING (Mag.)	D1	M E D2	DIST.	AZ.		
1136	10.20	22.5				1			
1135	13.60	30.9							
1134	11.1/3	26.8							
1133	11.05	25.0							
1131	F _t 11.80	27.7							
1142	10.20	22.7				7			
1141	13.60	30.9							
1140	11-1/3	27.0							
1138	11.05	25.9							
1137	F _t 11.80	27.6							
1148	10.20	22.6							
1147	13.60	31.0							
1147	11-1/3	26.8							
1146	11.05	25.9							
1145	F _t 11.80	27.6							

Site C 1A is approximately 30 meters from Site C 1. The mean values measured are within 1.75% of each other. This shows no appreciable field distortion.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: HAWAII SITE NO. C 1 DATE: 24 May 1979								
I _{as} 400	_ A. K	0 . 98	<u>,</u> 1	¹ / ₂ <u>1</u> · <u>(</u>	00	K ₃ _1	. 00	
LOOP HEIGHT (ABOVE:	SURFACE -	(mx/ft.) Brak levrux)	TRI	POD	HELI	COPTER _	X	
TYPE OF MEA	SUREMENT: H		AL. <u>X</u>	BENCHMAR	κ	ROUTIN	Ε	
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D	M E D2	DIST.	AZ. OT.	
1222	10.20	22.0	095			}		
1221	13.60	30.1						
1220	11.1/3	26.5						
1219	11.05	25.2						
1218	F _t 11.80	27.2						
1227	10.20	21.0						
1226	13.60	30.1						
1225	11-1/3	26.4						
1224	11.05	25.3						
1223	F _t 11.80	27.0						
1232	10.20	22.0						
1231	13.60	30.1						
1230	11-1/3	26.3						
1229	11.05	25.2						
1228	F _t 11.80	27.2						

COMMENT Nose generally toward the station. (-50 $^{\circ}$ from the loop plane.) First Kuilima calibration flight.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: HAWAII SITE NO. C 1 DATE: 24 May 1979								
I _{as} 400	_ A. K	0 . 98	<u>, </u>	K ₂ <u>1</u> .0	0	K ₃ 1	. 00	
LOOP HEIGHT 6 (MX/ft.) TRIPOD HELICOPTER X (ABOVE: SURFACE - SEX XVEXEX)								
TYPE OF MEASUREMENT: HELICOPTER CAL. X BENCHMARK ROUTINE								
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D1	M E D2	DIST.	AZ. OT.	
1244	10.20	22.3	280					
1243	13.60	30.3						
1242	11.1/3	26.5						
1241	11.05	25.1						
1240	F _t 11.80	27.3						
1248	10.20	22.1						
1247	13.60	29.9						
1246	11-1/3	26.5						
1245	11.05	25.0						
1244	F _t 11.80	27.4						
1252	10.20	22.2						
1251	13.60	30.2						
1250	11-1/3	26.4						
1249	11.05	25.3						
1248	F _t 11.80	27.4						

COMMENT Nose generally away from the station. (-50 $^{\circ}$ from the loop plane.) Second Kuilima calibration flight.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: HAWAII SITE NO. C 3 DATE: 25 May 1979									
I _{as} _400	A. K	0 . 98		K ₂ <u>0</u> .	99	K ₃ 1	· <u>00</u>		
LOOP HEIGHT 6 (MX/ft.) TRIPOD X HELICOPTER									
TYPE OF MEASUREMENT: HELICOPTER CAL. X BENCHMARK ROUTINE									
TIME (LOCAL)	FREQUENCY (kHz)	E _g (mV)	HEADING (Mag.)	D1 D	M E D2	DIST.	AZ.		
1002	10.20	23.4							
1001	13.60	31.8							
1000	11.1/3	27.4							
0959	11.05	26.3							
0958	F _t 11.80	28.0							
1006	10.20	23.3							
1005	13.60	31.6							
1005	11-1/3	27.3							
1004	11.05	26.4							
1003	F _t 11.80	28.0							
1018	10.20	23.0		· · · · · · · · ·		1			
1017	13.60	31.4							
1009	11-1/3	27.5							
1008	11.05	26.5							
1007	F _t 11.80	28.1							

COMMENT Not considered for a benchmark because of potential hotel construction.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u>I</u> s	ITE NO. C	3 DATE	:25 Ma	y 1979	
I _{as} 400	_ A. K	<u>0 · 98</u>	<u>,</u> 1	K ₂ <u>1</u> · <u>1</u>	00	K ₃ _1	. 00
LOOP HEIGHT	6 SURFACE -	(mx/ft.)	TRI	P 0 D	HELI	COPTER _	<u> </u>
	SUREMENT: H						
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
1055	10.20	22.5	095				
1054	13.60	30.7					
1053	11.1/3	26.5					
1052	11.05	25.6					
1051	F _t 11.80	27.1					
1059	10.20	22.2					
1058	13.60	30.5					
1057	11-1/3	26.6					
1056	11.05	25.6					
1056	F _t 11.80	27.2					
1104	10.20	22.3					
1103	13.60	30.3					
1102	11-1/3	26.7					
1101	11.05	25.5					
1100	F _t 11.80	27.3					

COMMENT Nose generally toward the station. (-50 $^{\circ}$ from the loop plane.) Second Kuilima calibration flight.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u> </u>	ITE NO. C 3	DATE:	25 May	1979	
I _{as} 400	_ A. K	<u>0 · 98</u>	<u>,</u> K	2	0	K ₃ _1	. 00
LOOP HEIGHT (ABOVE:	SURFACE -	(mk/ft.) Skalenka)	TRIP	OD	HELIC	OPTER _	X
TYPE OF MEA	SUREMENT: H		AL. <u>x</u>	BENCHMARK		ROUTIN	
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D M	E D2	DIST. km.	AZ. OT.
1111	10.20	21.0	275				
1110	13.60	29.9					
1110	11.1/3	25.9					
1109	11.05	25.0					
1108	F _t 11.80	26.8					
1115	10.20	22.0					
1114	13.60	29.9					
1113	11-1/3	26.2					
1113	11.05	25.1					
1112	F _t 11.80	26.9					
1119	10.20	22.3		1			
1118	13.60	29.8					
1117	11-1/3	26.0					
1117	11.05	24.0					
1116	F _t 11.80	26.7					

COMMENT Nose generally away from the station. (-50 $^{\circ}$ from the loop plane.) Second Kuilima calibration flight.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u> </u>	ITE NO. 00	0-20 DATE	: 27 MAY 19	79	
I _{as} 400	_ A. K	<u>0.98</u>	<u>. </u>	K ₂ <u>1</u> . <u>C</u>	00	K ₃ 1	. 03
LOOP HEIGHT (ABOVE:	1000 300000 -	(収./ft.) SEA LEVEL)	TRI	POD	HELIC	COPTER _	<u> </u>
TYPE OF MEA	SUREMENT: H	ELICOPTER CA	AL	BENCHMAR	K	ROUTIN	<u> </u>
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D1	M E D2	DIST.	AZ. OT.
0918	10.20	43.0	120	3120	11122	19.4	358
0917	13.60	56.0		3127	11149	19.4	359
0916	11.1/3	47.2		3194	11162	19.4	359
0915	11.05	45.9		3235	11171	19.5	359
0915	F _t 11.80	49.3		3262	11136	19.5	359
0922	10.20	43.0		2994	10965	19.4	358
0921	13.60	56.2		3033	10987	19.4	35 8
0920	11-1/3	47.0		3067	11031	19.4	358
0919	11.05	45.9		3099	11071	19.4	358
0919	F _t 11.80	49.1		3101	11061	19.4	358
	10.20					1	
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ION: HAWAI	<u> </u>	ITE NO. 000	0-25 DATE	: 27 MAY	1979	
I _{as} _400	_ A. K	0 . 98	<u>.</u>	K ₂ <u>1</u> .	00	K ₃ 1	. 03
LOOP HEIGHT (ABOVE:	1000 Surkace -	(東./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	X
TYPE OF MEA	ASUREMENT: HI		AL	BENCHMAR	К	ROUTIN	E <u>X</u>
TIME (LOCAL)	FREQUENCY (kHz)	E (mV)	HEADING (Mag.)		M E D2	DIST. km.	AZ. OT.
0905	10.20	34.5	120	7796	9416	24.1	001
0904	13.60	44.7		7816	9408	24.2	001
0903	11.1/3	37.2		7785	9463	24.1	001
0903	11.05	36.1		7846	9532	24.2	001
0902	F _t 11.80	38.8		7907	9548	24.2	001
0909	10.20	34.1	120	7841	8959	24.3	360
0908	13.60	44.5		7827	9055	24.3	360
0907	11-1/3	37.3		7826	9122	24.3	000
0906	11.05	36.4		7802	9250	24.2	000
0905	F _t 11.80	38.9		7785	9402	24.1	001
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: HAWAII SITE NO. 000-30 DATE: 27 MAY 1979										
I _{as} 400	_ A. K	<u>0 · 98</u>	<u>,</u> i	K ₂ <u>1</u> . <u>C</u>	00	K ₃ 1	. 03			
LOOP HEIGHT (ABOVE:	1000 SWRRACE -	(M./ft.) SEA LEVEL)	TRI	POD	HELIC	OPTER _	X			
TYPE OF MEA	SUREMENT: HE		AL	BENCHMAR	K	ROUTIN	E <u>X</u>			
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.			
0847	10.20	28.0	117	13098	7717	29.9	357			
0846	13.60	36.9		13118	7785	29.9	357			
0845	11.1/3	30.3		13118	7841	29.9	357			
0844	11.05	30.0		13179	7856	29.9	357			
0843	F _t 11.80	31.2		13209	7929	30.0	357			
0850	10.20	28.0	117	13074	7526	29.9	357			
0849	13.60	36.4		13078	7574	29.9	357			
0848	11-1/3	30.1		13061	7588	29.9	357			
0848	11.05	29.6		13093	7616	29.9	357			
0847	F _t 11.80	31.1		13128	7671	29.9	357			
0854	10.20	27.9	117	13121	7331	30.0	356			
0853	13.60	36.4		13062	7407	29.9	356			
0852	11-1/3	29.8		13071	7407	29.9	356			
0852	11.05	29.4		13073	7459	29.9	357			
0851	F _t 11.80	31.0		13041	7532	29.9	357			

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ION: HAWAI	<u>1</u>	ITE NO. 000	-35 DATE	: 27 MAY	1979	
	_ A. K						. 03
LOOP HEIGHT	1000 SURKALL -	(mX./ft.)	TRIF	POD	HELI(COPTEP _	_ X
	SUREMENT: HE	ELICOPTER C					
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D1	M E D2	DIST. km.	AZ. OT.
0832	10.20	23.7	117	18041	8730	35.0	353
0832	13.60	31.6		18040	8752	35.0	353
0831	11.1/3	26.2		18040	8774	35.0	353
0831	11.05	25.7		18069	8795	35.0	353
0830	F _t 11.80	26.4		18093	8808	35.0	353
0837	10.20	23.7	<u> </u>	18064	8666	35.0	352
0836	13.60	31.5		18035	8676	35.0	352
0835	11-1/3	26.2		18039	8663	35.0	352
0834	11.05	25.9		18003	8668	34.9	352
0833	F _t 11.80	26.8		18058	8700	35.0	352
	10.20						
	13.60					1	
	11-1/3						
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

	_ A. K					_	
OP HEIGHT (ABOVE:	1000 SERFACE -	(M./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	X
PE OF MEA	SUREMENT: H		AL	BENCHMAR	K	ROUTIN	ξE _
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D1	M E D2	DIST.	AZ OT
0810	10.20	19.9	117	23813	15819	40.5	359
0810	13.60	27.3		23840	15832	40.5	359
0809	11.1/3	22.6		23803	15804	40.5	359
0808	11.05	22.4		23873	15789	40.6	359
0807	F _t 11.80	23.0		23885	15786	40.6	359
0821	10.20	19.8		23845	15772	40.6	359
0820	13.60	27.4		23802	15754	40.5	359
0819	11-1/3	22.9		23792	15720	40.5	359
0819	11.05	22.6		23789	15719	40.5	359
0818	F _t 11.80	23.3		23752	15716	40.5	359
	10.20						
	13.60						
	11-1/3	-					
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u>I</u> s	ITE NO. 000	0-40 DATE	: 26 MAY 1	979	
	_ A. K						03
LOOP HEIGHT (ABOVE:	1000 Surrace -	(m./ft.) Sea LEVEL)	TRI	P0D	HELIC	OPTER _	X
	SUREMENT: HI	ELICOPTER C					
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
0654	10.20	20.3	125	24167	16445	40.8	000
0653	13.60	26.4		24111	16416	40.8	000
0652	11.1/3	21.5		24907	16412	41.7	358
0643	11.05	21.2		23912	16213	40.6	000
0642	F _t 11.80	22.7		23927	16219	40.6	000
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80	ļ					

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STAT	ION: HAWAI	<u> </u>	ITE NO. 050	<u>)-</u> 20 D ATE	: 27 MAY 19	79	
Ias 400	A. K	<u> 0 · 98</u>	<u>, </u>	K ₂ <u>1</u> · <u>(</u>	00	K ₃ 1	. 03
LOOP HEIGHT (ABOVE:	1000 SURFACE -	(nK./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	X
	ASUREMENT: H	ELICOPTER C					E <u>X</u>
TIME (LOCAL)	FREQUENCY (kHz)	E (mV)	HEADING (Mag.)	D D	M E	DIST.	AZ. OT.
1213	10.20	43.1	172	10897	23681	19.8	049
1213	13.60	55.3		10900	23626	19.8	050
1212	11.1/3	47.4		10835	23520	19.7	050
1211	11.05	45.9		10785	23432	19.7	050
1210	F _t 11.80	49.5		10750	23336	19.7	050
1218	10.20	43.5	172	10703	23825	19.5	049
1217	13.60	55.2		10809	23860	19.6	049
1216	11-1/3	46.8		10863	23862	1 ₁ 9.7	049
1215	11.05	45.5		10949	23880	19.8	049
1214	F _t 11.80	49.0		10931	23756	19.8	049
1222	10.20	43.8	172	10586	24100	19.3	047
1221	13.60	56.1		10604	24041	19.4	048
1220	11-1/3	47.4		10742	24172	19.5	047
1219	11.05	45.8		10748	24116	19.5	048
1219	F _t 11.80	49.6		10674	23893	19.5	048

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u> </u>	ITE NO. 050)-25 DATE	: 27 MAY 1	979	
I _{es} _400	_ A. K	<u>0 · 98</u>	<u>.</u>	K ₂ <u>1</u> . <u>1</u>	00	K ₃ 1	. 03
LOOP HEIGHT (ABOVE:	1000 SURFACE -	(X./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	X
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	κ	ROUTIN	E <u>X</u>
TIME (LOCAL)	FREQUENCY (kHz)	E (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ.
1200	10.20	35.0	172	15424	27223	24.2	046
1159	13.60	45.0		15400	27174	24.2	047
1158	11.1/3	37.7		15400	27126	24.2	047
1158	11.05	36.8		15401	27104	24.2	047
1157	F _t 11.80	39.4		15280	26901	24.1	047
1204	10.20	34.6		15462	27446	24.2	046
1203	13.60	44.7		15493	27413	24.2	046
1202	11-1/3	37.7		15588	27442	24.3	046
1201	11.05	36.9		15545	27370	24.3	046
1201	F _t 11.80	39.4		15444	27255	24.2	046
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATE	ON: HAWAI			0-30 DATE	: 27 MAY 1	979	
I _{as} _400	_ A. K	<u>0 · 98</u>	<u>, </u>	K ₂ <u>1</u> . <u>c</u>	00	K ₃ 1	. 03
LOOP HEIGHT (ABOVE:	SURKARE -	(m./ft.) SEA LEVEL)	TRI	POD	HELIC	COPTER _	X
TYPE OF MEA	SUREMENT: H	ELICOPTER C	AL	BENCHMAR	κ ˙	ROUTIN	<u> </u>
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D	M E D2	DIST.	AZ. OT.
1145	10.20	29.3	172	19674	29200	28.6	050
1144	13.60	33.0		19643	29096	28.6	050
1144	11.1/3	31.6		19642	29133	28.6	050
1143	11.05	31.4		19752	29060	28.7	050
1142	F _t 11.80	32.6		19742	29002	28.7	050
1150	10.20	29.6		19619	29494	28.5	049
1149	13.60	38.4		19592	29404	28.5	049
1148	11-1/3	31.7		19542	29276	28.4	049
1147	11.05	31.4		19608	29269	28.5	049
1146	F _t 11.80	32.7		19663	29263	28.6	049
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

DMEGA STATI	ION: HAWAI	<u> </u>	ITE NO. <u>050</u>	<u>-3</u> 5 DATE	: 27 MAY 1	979	
I _{as} 400	_ A. K	0.98	<u>,</u>	K ₂ <u>1</u> . <u>(</u>	00	K ₃ 1	. 03
LOOP HEIGHT (ABOVE:	1000 NINTACE -	(m./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	<u> </u>
TYPE OF MEA	ASUREMENT: H		AL	BENCHMAR	к	ROUTIN	<u>X</u>
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
1134	10.20	24.0	175	24771	32150	33.8	052
1133	13.60	32.6		24770	32075	33.8	053
1132	11.1/3	27.6		24806	32023	33.8	053
1132	11.05	27.2		24796	31939	33.8	053
1131	F _t 11.80	27.7		24788	31859	33.8	053
1138	10.20	24.3		24516	32216	33.5	052
1137	13.60	32.5		24552	32184	33.5	052
1136	11-1/3	27.3		24636	32207	33.6	052
1135	11.05	27.1		24663	32180	33.7	052
1134	F _t 11.80	27.7		24721	32168	33.7	052
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u>I</u> s	ITE NO. 05	0-40 DATE	. 27 MAY 1	979	
I _{as} 400	_ A. K	0 98	<u>, </u>	x ₂ <u>1</u> · <u>(</u>	00	K ₃ _ 1	. 03
LOOP HEIGHT (ABOVE:	1000 Surpace -	(M./ft.) SEA LEVEL)	TRI	POD	HEL10	COPTER _	<u> </u>
TYPE OF MEA	SUREMENT: H	ELICOPTER C	AL	BENCHMAR	к	ROUTIN	<u> </u>
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D1	M E D2	DIST.	AZ. OT.
1121	10.20	20.2	180	30190	35276	39.2	056
1120	13.60	27.5		30222	35188	39.3	056
1120	11.1/3	23.8		30140	34968	39.2	057
1119	11.05	23.0		30109	34814	39.2	057
1118	F _t 11.80	24.1		30224	3 4844	39.3	057
1126	10.20	20.3		30014	35608	39.1	055
1125	13.60	27.8		29909	35383	39.0	055
1124	11-1/3	24.1		29882	35146	38.9	056
1123	11.05	23.6		29984	35180	39.0	056
1122	F _t 11.80	24.2		30110	35270	39.2	056
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STAT	ION: HAWAI	<u> </u>	ITE NO. 120)-20 DATE	: 28 MAY 1	979	
I _{as} _400	_ A. K	<u> 0 · 98</u>	<u>, </u>	x ₂ <u>1</u> .	00	K ₃ 1	. 03
LOOP HEIGHT (ABOVE:	2000 BURKAKE -	(m./ft.) SEA LEVEL)	TRI	POD	. HEL1	COPTER _	X
TYPE OF MEA	ASUREMENT: H		AL	BENCHMAR	к	ROUTIN	E <u>X</u>
TIME (LOCAL)	FRE JUENCY (KHZ)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
0926	10.20	40.3	057	19514	7216	22.1	120
0925	13.60	51.2		19521	7277	22.1	120
0925	11.1/3	43.3		19492	7327	22.1	120
0924	11.05	41.7		19448	7381	22.1	120
0923	F _t 11.80	45.8		19374	7432	22.0	119
0930	10.20	40.0		19566	7180	22.1	120
0929	13.60	51.9		19500	7047	22.0	120
0929	11-1/3	44.0		19462	7055	22.0	120
0928	11.05	42.3		19515	7222	22.1	120
0927	F _t 11.80	45.9		19525	7214	22.1	120
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

COMMENT Height - Gain measurement.

RADIO FIELD INTENSITY MEASUREMENTS

	1000 SERKAEK -					_	
	SUREMENT: HE						
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D	M E D2	DIST.	9
0915	10.20	40.1	055	19313	7368	22.0]
0915	13.60	51.3		19301	7372	21.9	1
0914	11.1/3	43.4		19283	7373	21.9]
0913	11.05	42.2		19239	7370	21.9]]
0912	F _t 11.80	46.5		19173	7274	21.8	1
0919	10.20	40.0		19355	7412	22.0]
0919	13.60	51.3		19368	7404	22.0]
0918	11-1/3	43.3		19330	7357	22.0	
0917	11.05	42.2		19334	7363	22.0]
0916	F _t 11.80	45.9		19333	7388	22.0]
	10.20						
	13.60						_
	11-1/3						
	11.05				1		

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u> </u>	ITE NO. 120	-25 DATE	: 28 MAY	1979	
1 _{as} 400	_ A. K	<u>0 · 98</u>	<u>.</u>	K ₂ <u>1</u> . <u>(</u>	00	K ₃ 1	. 03
LOOP HEIGHT (ABOVE:	1000 Surkage -	(M./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	<u> </u>
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	К	ROUTIN	<u> </u>
TIME (LOCAL)	FREQUENCY (kHz)	E _g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
0900	10.20	35.9	057	22007	8672	24.8	120
0859	13.60	45.9		22008	8666	24.8	120
0858	11.1/3	38.4		22028	8706	24.8	120
0857	11.05	37.6		22031	8707	24.8	120
0857	F _t 11.80	40.1		22037	8658	24.8	120
0904	10.20	36.0	057	22028	8735	24.8	120
0903	13.60	45.8		22048	8743	24.8	120
0902	11-1/3	38.5		22062	8768	24.9	120
0902	11.05	37.8		22003	8710	24.8	120
0901	F _t 11.80	40.4		22005	8694	24.8	120
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u> </u>	ITE NO. 120	0-30 DATE	: 28 MAY 19	79	
1 _{as} 400	_ A. K	<u>0 · 98</u>	<u>, </u>	K ₂ <u>1</u> . <u>C</u>	00	K ₃ 1	. 03
LOOP HEIGHT (ABOVE:	1000 SURVACE -	(M./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	X
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	K	ROUTIN	<u> </u>
TIME (LOCAL)	FREQUENCY (kHz)	E _g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
0841	10.20	29.0	060	27035	12705	30.1	120
0840	13.60	37.2		27032	1 2 700	30.1	120
0839	11.1/3	30.7		26988	12632	30.0	120
0838	11.05	30.4		26993	12679	30.0	120
0837	F _t 11.80	32.1		26979	12662	30.0	120
0846	10.20	28.6		27025	12648	30.1	120
0845	13.60	37.0		27051	12636	30.1	120
0845	11-1/3	30.0		27043	12648	30.1	120
0842	11.05	29.3		27000	12579	30.0	120
0841	F _t 11.80	31.6		27036	12705	30.1	120
0850	10.20	29.3		26912	12615	30.0	120
0849	13.60	37.5		26914	12625	30.0	120
0848	11-1/3	30.8		26890	12629	30.0	120
0848	11.05	29.9		26884	12572	29.9	120
0847	F _t 11.80	31.7		26956	12613	30.0	120

RADIO FIELD INTENSITY MEASUREMENTS

	_ A. K						
P HEIGHT (ABOVE:	1000 INRAGE -	(M./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	X
E OF MEA	SUREMENT: H	ELICOPTER C	AL	BENCHMAR	к	ROUTIN	Ε.
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D1	M E D2	DIST. km.	A.
0828	10.20	25.3	062	31746	17037	35.0	1
0827	13.60	33.1		31720	17025	34.9	1
0826	11.1/3	26.8		31700	17016	34.9	1
0826	11.05	26.6		31693	17015	34.9	1
0825	F _t 11.80	27.3		31734	17089	35.0	1
0831	10.20	25.2	062	31697	16964	34.9	1
0830	13.60	32.9		31720	17001	34.9	1
0830	11-1/3	26.5		31730	17021	34.9	1.
0829	11.05	26.7		31724	17007	34.9	1
0828	F _t 11.80	27.3		31745	17033	35.0	12
	10.20						
	13.60						
	11-1/3				<u> </u>		
	11.05		1				

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u> </u>	ITE NO. 12	0-40 DATE	: 28 MAY 19	79	
	_ A. K						. 03
LOOP HEIGHT	1000 SOURCE -	(mg./ft.) SEA LEVEL)	TRI	POD	HELIC	OPTER _	Χ
	SUREMENT: H	ELICOPTER C					
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D	M E D2	DIST.	AZ. OT.
0809	10.20	21.0	062	37110	22297	40.5	120
0808	13.60	28.9		37118	22302	40.5	120
0807	11.1/3	23.6		37114	22331	40.5	120
0806	11.05	23.5		37156	22335	40.6	120
0805	F _t 11.80	23.3		37167	22352	40.6	120
0815	10.20	20.8		37195	22354	40.6	120
0814	13.60	28.8		37211	22373	40.6	120
0813	11-1/3	23.6		37218	22382	40.6	120
0813	11.05	23.8		37204	22359	40.6	120
0812	F _t 11.80	23.2		37178	22335	40.6	120
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

	ON: HAWAI						
	1000 EXERTANCE -					_	
PE OF MEA	SUREMENT: H		AL	BENCHMA	RK	ROUTIN	٤ _
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ OT
1242	10.20	43.4	122	14635	14133	19.8	18
1241	13.60	56.7		14630	14164	19.8	18
1240	11.1/3	47.1		14648	14151	19.8	18
1240 .	11.05	46.3		14633	14135	19.8	18
1239	F _t 11.80	48.6		14664	14138	19.8	18
1246	10.20	43.4		14821	13998	19.9	18
1245	13.60	56.8		14763	14083	19.9	18
1244	11-1/3	46.9		14757	14073	19.8	18
1243	11.05	45.9		14723	14079	19.8	18:
1242	F _t 11.80	48.5		14662	14099	19.8	18
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

	ON: <u>HAWAI</u> _ A. K						(
	1000 SURFACE -	-		_		•	
PE OF MEA	SUREMENT: H		AL	BENCHMAR	κ	ROUTIN	Ξ_
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D	M E D2	DIST.	AZ OT
1223	10.20	34.4	120	18663	16966	24.9	18
1222	13.60	45.4		18636	16962	24.9	18
1221	11.1/3	37.1		18643	16956	24.9	18
1221	11.05	36.8		18609	16977	24.9	18
1220	F _t 11.80	38.2		18566	16949	24.8	18
1127	10.20	34.4	120	18630	17012	24.9	18
1125	13.60	45.2		18623	17006	24.9	18
1126	11-1/3	36.9		18673	17012	25.0	18
1224	11.05	36.2		18718	16973	25.0	18
1224	F _t 11.80	37.7		18699	16986	25.0	18
1232	10.20	34.5	120	18575	17222	25.0	18
1231	13.60	45.4		18558	17173	24.9	18
1230	11-1/3	37.0		18556	17119	24.9	18
1229	11.05	36.8		18613	17032	24.9	18
1228	F _t 11.80	38.4		18586	17024	24.9	18

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STAT	ION: HAWAI	I s	ITE NO. 18	0-30 DATE	: 28 MAY 197	9	
I _{as} _400_	A. K	<u>1 0 · 98</u>	<u>, </u>	K ₂ _ 1 · 1	00	K ₃ 1	. 03
LOOP HEIGHT (ABOVE:	1000 Surkask -	(m./ft.) SEA LEVEL)	TRI	POD	HELIC	COPTEP _	Х
TYPE OF MEA	SUREMENT: H	ELICOPTER C	AL	BENCHMAR	K	ROUTIN	E <u>X</u>
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
1204	10.20	27.7	118	24212	19168	30.2	179
1203	13.60	38.0		24228	19125	30.2	179
1202	11.1/3	31.1		24248	19102	30.2	179
1201	11.05	30.8		24268	19087	30.2	179
1200	F _t 11.80	31.4		24276	19057	30.2	179
1208	10.20	28.0	118	24064	19213	30.1	179
1207	13.60	37.6		24101	19211	30.2	179
1206	11-1/3	31.1		24083	19208	30.1	179
1205	11.05	31.0		24124	19192	30.2	179
1205	F _t 11.80	31.4		24168	19171	30.2	179
1212	10.20	27.8	118	24244	19214	30.3	179
1211	13.60	37.8		24172	19220	30.2	179
1210	11-1/3	31.3		24104	19224	30.2	179
1210	11.05	30.8		24068	19245	30.1	179
1209	F _t 11.80	31.5		24048	19241	30.1	179

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u> </u>	ITE NO. 180)-35 DATE	: 28 MAY 19	79	
I _{as} 400	_ A. K	0 . 98	<u>, </u>	^K 2 <u>1</u> . <u>C</u>	00	K ₃ 1	. 03
LOOP HEIGHT (ABOVE:	1000 Surkark -	(m./ft.) SEA LEVEL)	· TRI	P00	HELIC	COPTEP _	X
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	κ <u> </u>	ROUTIN	<u> </u>
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D1	M E D2	DIST.	AZ. OT.
1151	10.20	23.2	120	28923	23765	35.5	180
1150	13.60	31.7		28929	23776	35.5	180
1149	11.1/3	26.8		28906	23718	35.5	180
1149	11.05	26.2		28947	23717	33.5	180
1148	F _t 11.80	27.1		29048	23728	35.6	180
1155	10.20	23.1	120	28982	23887	35.6	180
1154	13.60	31.6		28969	23870	35.6	180
1153	11-1/3	26.7		28960	23847	35.6	180
1152	11.05	26.1		28972	23832	35.6	180
1151	F _t 11.80	27.3		28939	23781	35.5	180
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

	A. K					•	
OP HEIGH	1000	(M./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	X
PE OF ME	ASUREMENT: H	ELICOPTER C	AL	BENCHMAR	К	ROUTIN	Ε_
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	6.7 0.7
1138	10.20	20.0	120	33393	28169	40.3	18
1137	13.60	27.1		33388	28142	40.3	18
1136	11.1/3	23.6		33428	28156	40.4	18
1136	11.05	22.6		33480	28137	40.4	18
1135	F _t 11.80	24.4		33504	28114	40.4	18
1142	10.20	20.1	120	33435	28177	40.4	18
1141	13.60	27.0		33503	28201	40.4	18
1140	11-1/3	23.4		33519	28195	40.4	18
1140	11.05	22.5		33500	28199	40.4	18
1139	F _t 11.80	24.5		33451	28181	40.4	18
	10.20						
	13.60						
	11-1/3						
_	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: HAWAII SITE NO. 265-20 DATE: 25 MAY 1979												
I _{as} 400	_ A. K	0.98	<u>,</u> I	(₂ <u>1</u> · <u>0</u>	0	K ₃ 1	. 03					
LOOP HEIGHT (ABOVE:	LOOP HEIGHT 4000 (nk./ft.) TRIPOD HELICOPTER X (ABOVE: SURRARE - SEA LEVEL)											
TYPE OF MEA	SUREMENT: H		AL	BENCHMARI	·	ROUTIN	E <u>X</u>					
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D 1	M E D2	DIST.	AZ. OT.					
1546	10.20	42.7	025	10270	17921	20.4	265					
1545	13.60	54.8		10169	17658	20.5	265					
1544	11.1/3	46.2		10070	17562	20.4	266					
1543	11.05	45.5		10097	17629	20.4	266					
1542	F _t 11.80	48.6		10189	17844	20.4	265					
1554	10.20	42.2	025	10354	17595	20.6	265					
1552	13.60	53.8		10431	17548	20.7	265					
1550	11-1/3	45.5		10666	17509	20.9	265					
1549	11.05	44.5		10419	17653	20.7	265					
1548	F _t 11.80	48.4		10315	17798	20.5	265					
1559	10.20	43.0		10122	17846	20.4	265					
1558	13.60	54.6		10345	17705	20.6	265					
1557	11-1/3	45.8		10417	17637	20.7	265					
1556	11.05	44.8		10391	17647	20.7	265					
1555	F _t 11.80	47.8		10508	17702	20.7	265					

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u>I</u> s	ITE NO.265	-25 DATE	: 25 MAY 19	79	
I _{as} 400	_ A. K	<u> 0 · 98</u>	<u>. </u>	K ₂ <u>1</u> .	00	K ₃ 1	. 03
LOOP HEIGHT (ABOVE:	4000 SURRACE -	(M./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	X
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	<u></u>	ROUTIN	E _X
TIME (LOCAL)	FREQUENCY (kHz)	E _g (mV)	HEADING (Mag.)	D1	M E D2	DIST.	AZ.
1613	10.20	35.2	035	14927	14861	25.5	266
1612	13.60	47.2		14862	14911	25.4	266
1612	11.1/3	37.8		14875	15050	25.4	266
1611	11.05	36.9		14858	15154	25.4	265
1610	F _t 11.80	39.0		15039	15218	25.5	265
1624	10.20	34.6		15099	14712	25.7	266
1617	13,60	46.7		15125	14946	25.7	266
1616	11-1/3	37.5		15082	14971	25.6	266
1615	11.05	37.0		15036	14905	25.6	266
1614	F _t 11.80	39.4		14936	14799	25.5	266
1624	10.20	34.6		14910	14829	25.5	266
1623	13.60	46.7		14902	14916	25.5	266
1622	11-1/3	37.6		14927	15030	25.5	266
1621	11.05	36.7		15033	15055	25.6	265
1620	F _t 11.80	38.8		15058	149 87	25.6	266

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u> </u>	ITE NO. 26	<u>5-</u> 30 D ATE	: 25 MAY	1979	
1 _{as} 400	_ A. K	0 . 98	<u>, </u>	K ₂ <u>1</u> . <u>C</u>	00	K ₃ 1	. 03
LOOP HEIGHT (ABOVE:	4000 SURKARE -	(m./ft.) SEA LEVEL)	TRI	POD	HELIC	OPTER _	X
	SUREMENT: HI	ELICOPTER C				ROUTIN	
TIME (LOCAL)	FREQUENCY (kHz)	E _g (mV)	HEADING (Mag.)	D1	M E D2	DIST.	AZ. OT.
1637	10.20	26.4	030	20219	13369	31.0	266
1636	13.60	34.9		20231	13436	31.0	266
1635	11.1/3	29.1		20190	13448	30.9	266
1634	11.05	28.8		20118	13491	30.8	266
1632	F _t 11.80	29.9		19765	13466	30.5	266
1642	10.20	26.4	030	20528	13415	31.3	266
1641	13.60	34.9		20492	13469	31.2	266
1640	11-1/3	28.8		20358	13383	31.1	266
1639	11.05	28.3		20337	13242	31.1	267
1638	F _t 11.80	29.4		20285	13269	31.0	267
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	OMEGA STATION: HAWAII SITE NO. 265-35 DATE: 25 MAY 1979											
I _{as} _400	A. K	<u>0 · 98</u>	<u></u>	K ₂ <u>1</u> .	00	K ₃ 1	. 03					
LOOP HEIGHT 4000 (M./ft.) TRIPOD HELICOPTEP X (ABOVE: SUPPRACE - SEA LEVEL)												
TYPE OF MEASUREMENT: HELICOPTER CAL. BENCHMARK ROUTINE X												
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D1 D	M E D2	DIST.	AZ. OT.					
1653	10.20	23.4	030	24614	13793	35.4	267					
1652	13.60	31.9		24632	13823	35.4	267					
1651	11.1/3	26.0		24697	13962	35.5	266					
1650	11.05	26.0		24624	13967	35.4	266					
1649	F _t 11.80	26.3		2463 8	14000	35.4	266					
1657	10.20	22.6		249 82	13729	35.8	267					
1656	13.60	31.6		24951	13722	35.8	267					
1655	11-1/3	25.9		24985	13817	35.8	267					
1654	11.05	25.9		24862	13793	35.7	267					
1654	F _t 11.80	26.4		24771	13842	35.6	267					
	10.20											
	13.60											
	11-1/3											
	11.05											
	F _t 11.80											

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	DMEGA STATION: HAWAII SITE NO. 265-40 DATE: 25 MAY 1979										
I _{as} _400	_ A. K	0 . 98	<u>, </u>	K ₂ <u>1</u> · <u>C</u>	00	K ₃ 1	. 03				
LOOP HEIGHT (ABOVE:	4000 SURFRACE -	(nK./ft.) SEA LEVEL)	TRI	POD	HELIC	COPTER _	<u> </u>				
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	к	ROUTIN	<u> </u>				
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ.				
	10.20		028			}					
	13.60										
1717	11.1/3	21.6		31013	20500	41.2	260				
1715	11.05	22.1		30427	20257	40.6	259				
1713	F _t 11.80	23.4		30277	20243	40.4	259				
	10.20										
	13,60										
	11-1/3	! !									
	11.05										
	F _t 11.80										
	10.20										
	13.60										
	11-1/3										
	11.05										
	F _t 11.80										

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u> </u>	ITE NO.265	<u>-3</u> 5 DATE	: 26 MAY 19	79	
1 _{as} 400	_ A. K	<u>0.98</u>	<u>. </u>	K ₂ <u>1</u> . <u>C</u>	00	K ₃ 1	. 03
LOOP HEIGHT	3000 3000	(前./ft.)	TRI	POD	HELIC	OPTER _	X
	SUREMENT: H	ELICOPTER CA			к		
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D	M E D2	DIST.	AZ.
1453	10.20	23.0	020	24839	16583	35.2	262
1453	13.60	32.3		24892	16626	35.2	262
1452	11.1/3	27.2		24961	16717	35.3	262
1450	11.05	25.9		2496 8	16702	35.3	262
1449	F _t 11.80	27.6		25038	16756	35.4	262
1458	10.20	23.0	020	24948	16833	35.2	261
1457	13.60	32.3		24926	16882	35.2	261
1456	11-1/3	27.3		24822	16752	35.1	261
1455	11.05	26.6		24680	16502	35.0	262
1454	F _t 11.80	27.8		24753	16539	35.1	262
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	DMEGA STATION: HAWAII SITE NO.265-40 DATE: 26 MAY 1979									
I _{as} 400	_ A. K	<u>0 · 98</u>	<u>, </u>	K ₂ <u>1</u> · <u>C</u>	00	K ₃ 1	. <u>03</u>			
LOOP HEIGHT	4000 SURFACE -	(n(./ft.)	TRI	P0D	HELIC	OPTER _	Х			
		·	•.							
TYPE UP MEA	SUREMENT: H		AL	BENCHMAR	K	ROUTIN	<u> </u>			
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D 1	M E D2	DIST.	AZ. OT.			
1519	10.20	20.3	205	28094	16508	38.7	264			
1518	13.60	28.9		28020	16475	38.6	264			
1518	11.1/3	24.3		28057	16671	38.6	264			
1517	11.05	23.7		28045	16701	38.6	264			
1515	F _t 11.80									
1524	10.20	20.4	205	27986	16305	38.6	264			
1523	13.60	28.9		27932	16283	38.6	264			
1522	11-1/3	24.5		27919	16222	38.6	265			
1521	11.05	23.7		27989	16288	38.6	264			
1520	F _t 11.80	25.5		27971	16210	38.6	265			
	10.20									
	13.60									
	11-1/3									
	11.05									
	F _t 11.80									

 $\ensuremath{\mathsf{COMMENT}}$ 1515 measurement not recorded. DME was obviously wrong but not noted until after the flight.

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u> </u>	ITE NO. 30	5-20 DATE	: 26 MAY	1979					
I _{as} _400	_ A. K	<u>0 · 98</u>	<u> </u>	K ₂ <u>1</u> .	00	K ₃ 1	. 03				
LOOP HEIGHT (ABOVE:	3000 TURKACK -	(東./ft.) SEA LEVEL)	TRI	POD	HELI	COPTER _	X				
TYPE OF MEA	TYPE OF MEASUREMENT: HELICOPTER CAL. BENCHMARK ROUTINE X										
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ.				
1331	10.20	43.2	065	19118	15579	19.2	300				
1330	13.60	58.3		19081	15746	19.1	300				
1329	11.1/3	48.9		19034	15787	19.1	300				
1327	11.05	48.1		18953	15827	19.0	300				
1326	F _t 11.80	50.9		18963	15807	19.0	300				
1336	10.20	43.6	065	19139	15600	19.2	300				
1335	13,60	58.1		19166	15642	19.2	300				
1334	11-1/3	48.4		19179	15587	19.3	300				
1333	11.05	47.2		19233	15509	19.3	300				
1332	F _t 11.80	50.3		19193	15554	19.3	300				
1341	10.20	43.8	065	19302	15529	19.4	300				
1340	13.60	58.3		19214	15666	19.2	300				
1339	11-1/3	48,4		19162	15721	19.2	300				
1338	11.05	47.5		19166	15733	19.2	300				
1337	F _t 11.80	50.5		19166	15638	19.6	29 8				

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: HAWAII SITE NO. 305-25 DATE: 26 MAY 1979											
I _{as} 400	_ A. K	<u>0 · 98</u>	<u>, </u>	x ₂ <u>1</u> . <u>(</u>	00	K ₃ _ 1	. <u>03</u>				
LOOP HEIGHT 3000 (M./ft.) TRIPOD HELICOPTER X (ABOVE: SURFACEX - SEA LEVEL)											
TYPE OF MEASUREMENT: HELICOPTER CAL. BENCHMARK ROUTINE X											
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D	M E D2	DIST.	AZ. OT.				
1149	10.20	32.4	065	24871	10644	25.6	302				
1148	13.60	44.2		24801	10937	25.4	302				
1147	11.1/3	36.2		24742	10773	25.4	302				
1146	11.05	36.0		24694	11040	25.2	302				
1145	F _t 11.80	37.6		24745	10999	25.3	302				
1154	10.20	33.1	065	24754	11011	25.3	302				
1153	13.60	44.6		24762	10926	25.3	302				
1152	11-1/3	36.3		24787	10760	25.5	302				
1151	11.05	35.6		24910	10754	25.5	302				
1150	F _t 11.80	36.8		24903	10669	25.6	302				
1205	10.20	33.6	065	24632	10961	25.2	302				
1159	13.60	44.7		24575	11075	25.1	302				
1158	11-1/3	37.3		24554	11162	25.1	302				
1157	11.05	36.5		24567	11273	25.0	302				
1156	F _t 11.80	38.0		24617	11138	25.1	302				

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: HAWAII SITE NO. 305-30 DATE: 26 MAY 1979											
$I_{as} = 400$ A. $K_1 = 0.98$, $K_2 = 1.00$ $K_3 = 1.03$											
LOOP HEIGHT 3000 (M./ft.) TRIPOD HELICOPTER X (ABOVE: SURFACE - SEA LEVEL)											
TYPE OF MEASUREMENT: HELICOPTER CAL. BENCHMARK ROUTINE X											
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.				
1128	10.20	26.9	060	28664	8752	29.5	303				
1128	13.60	37.4		28638	8736	29.5	303				
1127	11.1/3	31.0		28569	8743	29.4	303				
1126	11.05	30.5		28501	8788	29.4	302				
1125	F _t 11.80	31.8		28464	8620	29.4	302				
1132	10.20	26.3	030	28974	8819	29.8	303				
1131	13.60	36.5		29005	8767	29.8	303				
1130	11-1/3	29.7		28974	8754	29.8	303				
1129	11.05	29.4		28844	8714	29.7	303				
1129	F _t 11.80	30.6		28715	8653	29.6	303				
1137	10.20	26.8		28831	8904	29.6	303				
1137	13.60	36.9		28898	8880	29.7	303				
1136	11-1/3	30.2		28935	8860	29.7	303				
1135	11.05	29.5		28935	9013	29.7	304				
1134	F _t 11.80	30.6		29006	8873	29.8	303				

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: HAWAII SITE NO. 305-35 DATE: 26 MAY 1979											
I _{as} 400	I _{as} 400 A. K ₁ 0.98, K ₂ 1.00 K ₃ 1.03										
LOOP HEIGHT 3000 (m./ft.) TRIPOD HELICOPTER X (ABOVE: SHRRAGE - SEA LEVEL)											
TYPE OF MEA	SUREMENT: H		AL	BENCHMAR	К	ROUTIN	E <u>X</u>				
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.				
1112	10.20	23.0	060	34266	10164	34.8	306				
1111	13.60	31.5		34191	9995	34.8	306				
1110	11.1/3	26.8		34141	10021	34.7	306				
1109	11.05	26.2		34049	10144	34.5	306				
1108	F _t 11.80	27.4		33892	9846	34.5	306				
1116	10.20	23.0	060	34245	10436	34.6	307				
1115	13.60	31.5		34266	10363	34.7	307				
1114	11-1/3	26.7		34308	10299	34.8	307				
1114	11.05	26.0		34247	10244	34.7	306				
1113	F _t 11.80	27.3		34253	10235	34.7	306				
	10.20					1					
	13.60										
	11-1/3										
	11.05										
	F _t 11.80										

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATION: HAWAII SITE NO. 305-40 DATE: 26 MAY 1979											
	_ A. K						. 03				
LOOP HEIGHT	3000 SURFACE -	(成./ft.)	TRI	POD	HELIC	OPTEP _	Х				
	TYPE OF MEASUREMENT: HELICOPTER CAL. BENCHMARK ROUTINE X										
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D 1	M E D2	DIST.	AZ. OT.				
1056	10.20	19,3	065	39449	12236	40.4	306				
1055	13.60	26.5		39314	12189	40.2	306				
1054	11.1/3	22.9		39274	12136	40.2	306				
1052	11.05	22.6		39284	12511	40.0	307				
1051	F _t 11.80	24.1		39607	12689	40.4	306				
1101	10.20	19.6	065	39065	11988	40.0	306				
1100	13.60	26.6		39111	11979	40.1	306				
1059	11-1/3	23.2		39225	12954	40.2	306				
1058	11.05	22.1		39351	12149	40.3	306				
1057	F _t 11.80	23.9		39390	12209	40.3	306				
Γ	10.20										
	13.60										
	11-1/3										
	11.05										
	F _t 11.80										
1						<u> </u>					

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u> </u>	ITE NO. A	DATE	: 31 MAY 19	979	
I _{as} 400	_ A. K	<u> </u>		K ₂ <u>0</u> · <u>9</u>	9	K ₃ 1	· <u>00</u>
LOOP HEIGHT (ABOVE:	6 SURFACE -	(m./ft.) SEXXIVEVEL)	TRI	POD <u>X</u>	HELI	COPTER _	
TYPE OF MEA	SUREMENT: H	ELICOPTER C	AL	BENCHMAR	к <u>х</u>	ROUTIN	Ε
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)		M E D2	DIST.	AZ. OT.
1142	10.20	47.4					
1139	13.60	62.6					
1137	11.1/3	51.2					
1135	11.05	50.1					
1129	F _t 11.80	54.2					
1200	10.20	47.5					
1156	13.60	61.7					
1154`	11-1/3	51.4					
1153	11.05	50.6					
1149	F _t 11.80	53.9					
1223	10.20	47.2					
1222	13.60	61.0				1	
1207	11-1/3	51.2			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
1205	11.05	50.4					
1204	F _t 11.80	54.1					

COMMENT

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u>1</u> s	ITE NO. B	DATE	: 31 MAY 19	79	
	_ A. K						
LOOP HEIGHT	SURFACE -	(m./ft.)	TRI	POD X	HELI	COPTER _	
	SUREMENT: H						
	SOREMENT: II		n	DENUNIAR	<u> </u>	ROUTIN	·
TIME (LOCAL)	FREQUENCY (kHz)	E g (mV)	HEADING (Mag.)	D D1	M E D2	DIST. km.	AZ. OT.
1417	10.20	48.5					
1416	13.60	64.1					
1415	11.1/3	52.8				1	
1414	11.05	51.7					
1413	F _t 11.80	55.9					
1420	10.20	48.6					
1420	13.60	64.1					
1419	11-1/3	52.7					
1419	11.05	51.7					
1418	F _t 11.80	55.7					
1424	10.20	48.5					
1423	13.60	64.1					
1422	11-1/3	52.8					
1422	11.05	51.7					
1421	F _t 11.80	55.8					

COMMENT

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	I s	ITE NO. C	DAT	E: 1 JUNE 19	79	
I _{as} 400	_ A. K	<u>0 · 98</u>	_ '	⁽ 2 <u>0</u> · .	99	K ₃ 1	. 00
LOOP HEIGHT (ABOVE:	6 Surf ac e -	(m./ft.) TRAXMENEM)	TRII	POD <u>X</u>	_ HELI	COPTER _	
TYPE OF MEA	SUREMENT: H		AL	BENCHMA	RK <u>χ</u>	ROUTIN	E
TIME (LOCAL)	FREQUENCY (kHz)	E (mV)	HEADING (Mag.)	D D1	M E D2	DIST.	AZ. OT.
0947	10.20	34.3					
0946	13.60	47.3					
0945	11.1/3	38.3					
0944	11.05	37.5					
0943	F _t 11.80	39.5					
0952	10.20	34.3					
0951	13.60	47.0					
0950	11-1/3	38.0					
0950	11.05	37.6					
0949	F _t 11.80	39.6					
0957	10.20	34.2					
0956	13.60	47.1					
0955	11-1/3	38.0					
0954	11.05	37.3					
0953	F _t 11.80	39.5					

COMMENT

RADIO FIELD INTENSITY MEASUREMENTS

OMEGA STATI	ON: HAWAI	<u>I</u>	ITE NO. C	DATE	: 1 JUNE 19	79	
Ias 400	_ A. K	<u>0 · 98</u>	_	K ₂ _ 0	99	K ₃ 1	. 00
LOOP HEIGHT	SURFACE -	(m./ft.)	TRI	POD <u>X</u>	HELI	COPTER _	· · · · · · · · · · · · · · · · · · ·
	SUREMENT: H	ELICOPTER C					
TIME (LOCAL)	FREQUENCY (kHz)	E _g (mV)	HEADING (Mag.)		M E D2	DIST.	AZ.
	10.20	34.2					
	13.60	47.0					
	11.1/3	38.0					
	11.05	37.2					
1000	F _t 11.80	39.6					
	10.20						
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						
	10.20					1	
	13.60						
	11-1/3						
	11.05						
	F _t 11.80						

COMMENT Taken by Chief Cox.

		HEL	I COP1	rer (CAL.			_·	BE	ENCH	MARK			_ R	ROUTIN	ίΕ _	X		
						00_		ft.)	T	RIPO	D		Н!	ELICO	OPTER		<u> </u>		
		(Ab	ove	XXX	*	/S.L.)		٠			ł_ 			· ,			 	-
27 MAY 1979	ctor	Erd/Ia (Units)	2.131	2.131		2.809	2.819		2.351	2.341		2.296	2.284		2.473	2.450	4		
DATE: 27 M	l . 03 Vehicle Factor	Rr (Ohir)	0.0504	0.0504		0.0877	0.0883		0.0614	0.0609		0.0586	0.0580		0.0680	0.0667			
0	ж 3	he (m)	166	166		164	165		165	164		165	164		167	165			
000-20	1 . 00 Loop Factor	Pr (KW)	7.8	7.8		13.5	13.6		9.4	9.4		9.0	8.9		10.4	10.2			
1	K ₂ = 1	Er (mV/m)	43.1	43.1		56.8	57.0		47.5	47.3		46.2	46.1		49.7	49.5			,
SITE NUMBER:	0 . 98 I _a /I _{as}	Ε _Μ (mV/m)	44.3	44.3		57.7	57.9		48.6	48.4		47.3	47.3		50.8	50.6			
	κ ₁ =	1 (A)	392																<u> </u>
HAWA! I	kg	Eq (mV)	43.0	43.0		56.0	56.2		47.2	47.0		45.9	45.9		49.3	49.1			
		Igs (A)	400																
OMEGA STATION:	Distance: (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				<u> </u>
OMEGA	Distance: (If const	Dist. (km.)	19.4	19.4		19.4	19.4		19,4	19,4		19,5	19,4		19.5	19.4		.	

			٥٥ ل	P HE	TER C	_10	00	(ii./	-					_	OUTII	_			
			(Ab	ove	XXXX	*XXX	S.L.)				 							
1979		ctor	Erd/la (Units)	2.145	2.138		2.813	2.812		2.320	2.347	2.260	2.279		2.433	2.429			
DATE: 27 MAY 1979	1 . 03	Vehicle Factor	Rr (Ohr)	0.0511	0.0508		0.0879	0.0879		0.0598	0.0612	0.0567	0.0577		0.0658	0.0656			
9	ا		Р. (m)	167	167		165	165		163	165	163	164		164	164			
000-25	1 . 00	Factor	Pr (kW)	7.9	7.8		13.5	13.5		9.2	9.4	8.7	8.9		10.1	10.1			
ł	K2 = 1		Er (mV/m)	34.9	34.5		45.6	45.4		37.7	37.9	36.6	36.9		39.4	39.5			
SITE NUMBER:	96 . 0	I	Em (mV/m)	35.5	35.1		46.0	45.8		38.3	38.4	37.2	37.5		40.0	40.1			
	K ₁ =		-[V]	392															
HAWA! I	km.		(mV)	34.5	34.1		44.7	44.5		37.2	37.3	36.1	36.4		38.8	38.9			
	•		1 (A)	400															
OMEGA STATION:	nce:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3		11.05			11.80				
OMEGA	Distance:	(If c	Dist. (km.)	24.1	24,3		24.2	24.3		24,1	24,3	24.2	24.2		24.2	24.1	•		•

			COPT				 -	_·		NCHM				-	ROUTII	_	X	
			P HE					ft.)	T	RIPO	D		Н	ELIC	PTER		Х	
				~~~		J.L.	<del>'</del>	-1			-	1						
27 MAY 1979	ctor	Erd/la (Units)	2.173	2.173	2.173	2.879	2.840	2.840	2.357	2.342	2.318	2.333	2.305	2.286	2.437	2.421	2.413	
DATE: 27 MAY	l 03 Vehicle factor	Rr (Ohn)	0.0525	0.0525	0.0525	0.0921	0.0896	0.0896	0.0617	0.0609	0.0597	0.0605	0.0589	0.0581	0.0660	0.0651	0.0647	
0	ж 3	a (E)	170	170	170	168	166	166	166	164	163	168	166	165	164	163	163	
000-30	) 00 Loop Factor	Pr (KW)	8.1	8.1	8.1	14.2	13.8	13.8	9.5	9.4	9.5	9.3	9.0	8.9	10.1	10.0	6.6	
1	K ₂ = Loop	Er (mV/m)	28.5	28.5	28.4	37.7	37.2	37.2	30.9	30.7	30.4	30.6	30.2	30.0	31.8	31.7	31.6	
SITE NUMBER:	98 . 98 a/las	Ε _m (mV/m)	28.8	28.8	28.7	38.0	37.5	37.5	31.2	31.0	30.7	30.9	30.5	30.3	32.1	32.0	31.9	
	κ ₁ "	1 (A)	392								İ							
HAWA! I	<b>к</b>	(Vm)	28.0	28.0	27.9	36.9	36.4	36.4	30.3	30.1	29.8	30.0	29.6	29.4	31.2	31.1	31.0	
	•	las (A)	400															
OMEGA STATION:	Distance: (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80			
OMEGA	Distance: (If const	Dist. (km.)	29.9	29.9	30.0	6,62	29.9	6'62	59.9	6.62	29.9	29.9	6.62	29.9	30.0	59.9	29.9	

		MEL	I CUP	TER (	CAL.			<b>-</b> •	ВЕ	INCH	1ARK	_		_ R	OUTI	HE _	X		
		L00	P HE	IGHT	_10	000	(ài./	ft.)	T	RIPO	D		Н	ELIC(	PTER		X		
		(Ab	ove	KKKA	axxe/	S.L.	)		_									<b></b>	
tor		Erd/la (Units)	2.160	2.160		2.892	2.882		2.392	2.392		2.346	2.357		2.412	2.448			
Vehicle Fac		Rr (Ohr:)	0.0519	0.0519		0.0929	0.0923		0.0636	0.0636		0.0611	0.0617		0.0646	0.0666			
, K		ће (ш)	169	169		169	169		168	168		169	170		163	165			
00 Factor		Pr (kW)	8.0	8.0		14.3	14.2		9.8	9.8		9.4	9.5		6.6	10.2			
11		Er (mV/m)	24.2	24.2		32.4	32.3		26.8	26.8		26.3	26.5		27.0	27.4			
86 .	se, ,e	Ε _m (mV/m)	24.4	24.4		32.5	32.4		27.0	27.0		26.5	26.7		27.2	27.6			
κ ₁ =	•	1 (A)	392																
km.		Eg (mV)	23.7	23.7		31.6	31.5		26.2	26.2		25.7	25.9		26.4	26.8			
		1 d S	400																
ınce:	constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
Dista	5 1	Dist. (km.)	35,0	35.0		35.0	35.0		35.0	35.0		35.0	34,9		35.0	35.0			
	$k_{\text{m}}$ , $k_{1} = 0$ , $98$ , $k_{2} = 1$ , $00$ , $k_{3} = 1$	ant) . km., $K_1 = \frac{0.98}{I_a/I_{as}}$ $K_2 = \frac{1.00}{I_{cop}}$ $K_3 = \frac{1}{I_{cop}}$ .	tance: . km., $K_1 = 0$ . $98$ $K_2 = 1$ . $00$ $K_3 = 1$ . $03$ constant)  Freq. $\frac{1}{4}$ $\frac{1}$	tance: . km., $K_1 = 0 . 98$ $K_2 = 1 . 00$ $K_3 = 1 . 03$ constant)  Freq. $\frac{1}{4}$	tance: . km., $K_1 = 0$ . 98 $K_2 = 1$ . 00 $K_3 = 1$ . 03  constant)  Freq. I ₃ E ₄ (mV) (A) (mV/m) (mV/m) (mV/m) (KW) (M) (M) (M) (M) (M) (M) (M) (M) (M) (M	tance: . km., $K_1 = 0$ . 98 $K_2 = 1$ . 00 $K_3 = 1$ . 03  constant)  Freq. $\begin{bmatrix} I_{a}S \\ K_{b} \end{bmatrix}$ Eq. $\begin{bmatrix} I_{a}S \\ (kHz) \end{bmatrix}$	tance: . km., $K_1 = 0$ . 98 $K_2 = 1$ . 00 $K_3 = 1$ . 03  constant)  Freq. I ₃ E _M (mV) (A) (mV/m) (mV/m) (KW) (M) (m	tance: km., $K_1 = 0$ . 98 $K_2 = 1$ . 00 $K_3 = 1$ . 03 constant)  Freq. I _A S (mV) (A) (MV/m) (MV/m) (KW) (M) (M) (M) (MV/m) (MV	tance: km., $K_1 = 0$ . 98 $K_2 = 1$ . 00 $K_3 = 1$ . 03  constant)  Freq. 138 $K_2 = 1$ . 00 Factor  1a/Las  Loop Factor  (kHz) (Å) (mV) (M) (mV/m) (mV/m) (m) (0hm') (0hm') (10 its)  10.20 400 23.7 392 24.4 24.2 8.0 169 0.0519 2.160 as 13.6 32.5 32.4 14.3 169 0.0929 2.892 7. 31.5 32.4 32.3 14.2 169 0.0923 2.882	tance: km., $K_1 = 0.98$ $K_2 = 1.00$ $K_3 = 1.03$ constant)  Freq. 1as	tance:  constant)  constant)  freq.    1 _a S   E _q   I _a	constant) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	constant)    constant   constant	constant)  Late and the constant by the const	tance:	Constant   Constant	constant)    Authority   Autho	constant)    Constant   Constant	constant)  constant)  constant)  constant)  freq.  (kHz) (kHz) (A) (A) (B) (A) (B) (B) (B) (B) (B) (B) (B) (B) (B) (B

			HEL	I COP	TER	CAL.			٠.	В	EN CHI	MARK			_	TTUO	NE _	X		
			L00	P HE	IGHT	10	00_	(nk./	ft.)	T	RIPO	D		Н	ELIC	OPTER		X		
			(At	ove	<b>Z</b> ZXX	AXE/	S.L.	)				4	- 1 _		1				L	
1979		ctor	Erd/la (Units)	2.104	2.098		2.894	2.905		2.392	2.424		2.376	2.391		2.442	2.467			
DATE: 27 MAY 1979	1 . 03	Vehicle Factor	Rr (Ohn:)	0.0492	0.0489		0.0931	0.0938		0.0636	0.0653		0.0627	0.0635		0.0662	0.0676			
ď	لا _ء ؞		he (m)	164	164		169	170		168	170		171	172		165	166			
000-40	00 . 1	Loop Factor	Pr (KW)	7.6	7.5		14.3	14.4		9.8	10.0		9.6	9.8		10.2	10.4			
Ì	K ₂ =		Er (mV/m)	20.4	20.3		28.0	28.1		23.2	23.5		22.9	23.1		23.6	23.9			
SITE NUMBER:	96 . 0	la/las	(mV/m)	20.5	20.4		28.1	28.2		23.3	23.6		23.1	23.3		23.7	24.0			
	π	•	(A)	392																
HAWAII	km.		Eq (mV)	19.9	19.8		27.3	27.4		22.6	22.9		22.4	22.6		23.0	23.3			
	•	<b>!</b>	1 A S	400																
OMEGA STATION:	ince:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OMEGA	Distance:	(1f c	Dist. (km.)	40.5	40.6		40.5	40.5		40,5	40.5	٠	40,6	40.5	•	9'0\$	40.5	٠	•	•
			<b></b>		<b></b>	<b></b>		L	<b></b>	<del></del>	·			·		<del></del>			ر	

			LO	OP ∺E	TER C IIGHT <b>Smrt</b> i	<b>,</b> , i	 i.	1			* *	<b>4</b> ,200				PU.T; '`* Tį £		<u>x</u>		
26 MAY 1979		ctor	frd/la (Units)	2.162					•			. ,		•		5 <b>18</b> 77				:
DATE: 26 M	1 . 03	Vehicle Factor	Rr (Ohn)	0.0519						÷			• ,			0.0648				ŧ.
0	* <b>X</b>	~	ج (E)	169			l sec			16.				•		163				i
000-40	00 .	Loop Factor	Pr (KW)	8.0			13.6			9.4			9 'H			6.6		* · · · · · · · · · · · · · · · · · · ·		
ł	K, = 1		Er (mV/m)	20.8			27.1			22.0			21.7			23.3				
SITE NUMBER:	96 . 0	3 S	Em (mV/m)	20.9			27.2			22.1			21.8			23.4				
	K ₁ =		LA (A)	392																
HAWA! 1	km.		Eq.	20.3			26.4			21.5			21.2			22.7				
	•		14 (A)	400																
OMEGA STATION:	nce:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OMEGA	Distance:	(1f c	Dist. (km.)	40.8			40.8	•	·	41.7	•	٠	40.6		٠	40.6	٠		•	
							·							<u></u>	-+					

	HELI	COPT	ER C	AL.			.•	BE	NCHM	ARK			R	OUTIF	ίΕ	Х		
							ft.)	TI	RIPO		<del></del> -	H	ELICO	PTER		Χ		
,	(Ab	ove	XXXX	XXX/	S.L.	)	+	······································			<del></del>	<del></del>		<del></del>	<del></del> ;	1	<del></del>	
ctor	Erd/la (Units)	2.182	2.167	2.159	2.833	2.798	2.814	2.399	2.369	2.374	2.321	2.313	2.291	2.510	2.498	2.488		
1 03 Vehicle Fa	Rr (Ohm)	0.0529	0.0522	0.0518	0.0892	0.0870	0.0880	0.0640	0.0624	0.0626	0.0598	0.0594	0.0583	0.0700	0.0693	0.0688		
ж 3	er (m)	170	169	168	166	164	165	168	166	167	167	167	165	169	168	168		
1 00 5 Factor	Pr (kW)	8.1	8.0	8.0	13.7	13.4	13.5	9.8	9.6	9.6	9.2	9.1	9.0	10.8	10.7	10.6		
K2 = Loop	Er (mV/m)	43.2	43.6	43.8	56.1	56.0	56.9	47.7	47.1	47.7	46.2	45.8	46.1	49.9	49.4	50.0	i i	
0 . 98 a/Tas	Ε _m (mV/m)	44.4	44.8	45.1	57.0	56.9	57.8	48.8	48.2	48.8	47.3	46.9	47.2	51.0	50.5	51.1		
κ ₁ = 1	(V)	392																
<u>ل</u> ا	Eg (mV)	43.1	43.5	43.8	55.3	55.2	56.1	47.4	46.8	47.4	45.9	45.5	45.8	49.5	49.0	49.6		
	148 (A)	400																
nce: onstant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
Distal (If c	Dist. (km.)	19.8	19,5	19.3	19.8	19.6	19.4	19.7	19.7	19.5	19.7	19.8	19.5	19.7	19.8	19.5		·
	$K_1 = \frac{0}{1_a/I_{as}}$ $K_2 = \frac{1}{1_{00p}}$ $K_3 = \frac{1}{1_{00p}}$	tance: constant) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	tance:	tance: constant) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	tance: constant) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	tance: . km., $k_1 = 0$ . 98 $k_2 = 1$ . 00 $k_3 = 1$ . 03 constant)  Freq. [I _a ] [E _q ] [M,] [M,] [M,] [M,] [M,] [M,] [M,] [M,	tance:	constant) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	tance: constant) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	constant) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	constant) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	constant)       km., kl = 14/1as       k2 = 100p Factor       k3 = 1 03       kphicle Factor         Freq. (kHz)       (Å)       (mVm)       (mVm)       (kW)       (mVm)       (	constant)    Lange I A S    Lange I	Constant   Constant	Constant   Constant	Freq.	constant) $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	10.20   40.0   43.1   39.2   44.4   43.2   8.1   170   0.0529   2.182   44.4   43.2   43.6   8.0   169   0.0522   2.187   47.4   43.8   44.8   43.6   8.0   169   0.0518   2.183   47.7   44.8   47.7   45.8   18.0   18.6   0.0689   2.374   47.4   48.8   47.7   9.8   168   0.0684   2.374   47.4   48.8   47.7   9.8   168   0.0684   2.374   47.4   48.8   47.7   9.8   168   0.0684   2.374   47.4   48.8   47.7   9.8   168   0.0684   2.374   47.4   48.8   47.7   9.8   168   0.0684   2.374   47.4   48.8   47.7   9.8   168   0.0684   2.374   47.4   48.8   47.7   9.8   168   0.0684   2.374   47.8   46.8   47.7   9.8   168   0.0684   2.374   47.8   46.8   47.7   9.8   168   0.0684   2.374   47.8   46.8   47.7   9.8   168   0.0684   2.374   47.8   46.8   47.7   9.8   168   0.0684   2.374   47.8   46.8   47.7   9.8   168   0.0684   2.374   47.8   46.8   47.7   9.8   168   0.0684   2.374   47.8   46.8   47.7   9.8   168   0.0684   2.374   47.8   46.8   47.7   9.8   168   0.0684   2.374   47.8   46.8   47.7   9.6   167   0.0684   2.374   47.8   46.8   47.7   9.8   168   0.0684   2.374   47.8   46.8   47.7   9.8   168   0.0684   2.374   47.8   46.8   47.7   9.8   168   0.0684   2.374   47.8   46.8   47.7   9.8   168   0.0688   2.374   47.8   47.8   46.1   9.0   165   0.0588   2.371   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8   47.8

				COPI					 		NCHM NCOM		ш	•	OU: IT	_	X		
				P HE					†t.)	11	RIPO	 	nt	LIC	JPIEK		<u> </u>	_	
1979		tor	Erd/la (Units)	2.185	2.160	222	2.832	2.813		2.362	2.372	2.304	2.320		2.461	2.471			
DATE: 27 MAY 1979	1 . 03	Vehicle Factor	Rr (Ohn)	0.0530	0.0518		0.0891	0.0879		0.0620	0.0625	0.0590	0.0598		0.0673	0.0678			
70	, ا		he (m)	170	169		166	165		166	167	166	167		166	167			
050-25	1 . 00	o Factor	Pr (KW)	8.2	8.0		13.7	13.5		9.5	9.6	9.1	9.2		10.3	10.4			
!	K2 =		Er (mV/m)	35.4	35.0		45.9	45.6		38.3	38.3	37.3	37.4		40.0	40.0			
SITE NUMBER:	<b>∞</b>	l _a /las	Em (mV/m)	36.1	35.6		46.4	46.0		38.8	38.8	37.9	38.0		40.6	40.6			
	K1 =		ار (۸)	392															
HAWAII	F		Eq (mV)	35.0	34.6		45.0	44.7		37.7	37.7	36.8	36.9		39.4	39.4			
			1 d S	400															
OMEGA STATION:	nce:	(If constant)	Freq. (KHZ)	10.20			13.60			11-1/3		11.05			11.80				
OMEGA	Distance:	(1£ c	Dist. (km.)	24.2	24.2		24.2	24.2	٠	24.2	24.3	24.2	24.3		24.1	24.2	٠	•	•
			4	<u> </u>	4					·		 							

				I COP				··	_•		ENCH	MARK			_ 1	ROUTI	NE _	X	, <del></del>		
				ove					ft.)	) Ţ	RIPO	D		_ H	ELIC	OPTE	₹	Х			
27 MAY 1979		ctor	Erd/la (Units)	2.173	2.187	.,	2.834	2.854		2.349	2.340		2.342	2.325		2.434	2.433				
DATE: 27 M	1 . 03	Vehicle Factor	Rr (Ohn)	0.0525	0.0532		0.0893	0.0905		0.0613	0.0608		0.0609	0.0601		0.0658	0.0658				
0	۳,	<b>.</b>	he (m)	170	171		166	167		165	164		169	167		164	164				
050-30	1 . 00	Loop Factor	Pr (kW)	8.1	8.2		13.7	13.9		9.4	9.3		9.4	9.2		10.1	10.1				<b></b>
SITE NUMBER:	K ₂ =		Er (mV/m)	29.8	30.1		38.8	39.3		32.2	32.3		32.0	32.0		33.2	33.7				
SITE	96 . 0	la/las	Ε _m (mV/m)	30.2	30.5		39.1	39.6		32.5	32.7		32.3	32.3		33.6	33.7				
	- K		1 (A)	392																	T
HAWA! I	km.,		Eq (mV)	29.3	29.6		38.0	38.4		31.6	31.7		31.4	31.4		32.6	32.7			<u></u>	1
			1 _d \$ (A)	400																	
OMEGA STATION	Distance:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80					
OME G.	Dist	(14)	Dist. (km.)	28.6	28.5		28.6	28.5		28,6	28,4		28,7	28.5	·	28.7	28.6			•	

	HEL	LCOP	TER	CAL.			_•	В	ENCH	MAKK			_	ROUTI	NE _	X		
	L00	OP HE	IGHT	10	00_	(M./	ft.)	ī	RIPO	D		Н	ELIC	OPTER	₹	X		
	(At	ove	KKKK	PAXXE/	S.L.	)		1			ı			L			1	
tor	Erd/la (Units)	2.111	2.118		2.880	2.845		2.432	2.391		2.396	2.380		2.443	2.435			
l . 03 Vehicle Fac	Rr (Ohn)	0.0495	0.0499		0.0921	0.0899		0.0657	0.0635		0.0638	0.0629		0.0663	0.0659			
K ₃ =	<u>a</u> €	165	165		168	166		171	168		173	171		165	164			
n . 00 p Factor	Pr (kW)	7.6	7.7		6 VI	13.8		10.1	9.8		9.8	9.7		10.2	10.1			
K2 = 100	Er (mV/m)	24.5	24.8		33.4	33.3		28.2	27.9		27.8	27.73		28.3	28.3			
0 . 98 a/las	Em (mV/m)	24.7	25.0		33.6	33.5		28.4	28.1		28.0	27.9		28.5	28.5			
κ ₁ =	[A]	392													-	;		
km.,	Eg (mV)	24.0	24.3		32.6	32.5		27.6	27.3		27.2	27.1		27.7	27.7			
	185 (A)	400																
onstant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
Dista (If c	Dist. (km.)	33.8	33.5	•	33.8	33.5	•	33,8	33.6	•	33.8	33.7	•	33.8	33.7	٠		
	$K_1 = \frac{0.98}{I_a/I_{as}}$ $K_2 = \frac{1.00}{Loop\ Factor}$ $K_3 = \frac{1}{Vehicle}$	stance: km., $K_1 = 0.98$ $K_2 = 1.00$ $K_3 = 1.03$ f constant)	stance:       .       km., $K_1 = 0$ . 98 $K_2 = 1$ . 00 $K_3 = 1$ . 03         f constant)       Ia/las       Loop Factor $K_3 = 1$ . 03         Freq.       Ia/m       Empty (mV/m)       Image: Im/m       Image: Im/m       Image: I	stance:       . km., $K_1 = 0$ . 98 $K_2 = 1$ . 00 $K_3 = 1$ . 03         f constant)       Ia/Ias       Loop Factor $K_3 = 1$ . 03         Freq. (kHz)       Iast (mV)       Iast (kHz)       Iast (mV)       Iast (mV/m)       Iast (m	Freq.   I _a s   E _q   I _a s   E _m   (mV)   (MM)   (MV/m)   (MW/m)   (M	From stant)  From stant)  From Stante:	stance: $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Freq. I ₃ E _q (mV) (A) (mV/m) (mV/m) (KW) (M) (M) (M) (M) (M) (M) (M) (M) (M) (M	Freq. 148 Eq. (AHZ) (A) (A) (AHZ) (	Freq.   I ₃   E ₄   I ₃   E ₄   I ₃   E ₄   I ₃   I ₄   I ₃   I ₄   I ₄	Freq.   1 ₃   Eq.   1 ₃   Eq.   1 ₄   E   1 ₄   E   1 ₄   E   1 ₄   E   1 ₄   E   1 ₄   E   E   E   1 ₄   E   E   E   E   E   E   E   E   E	Freq.   A	Freq.   I ₃   E _q   I _q   E _q   I _q   E _q   I _q	Freq.   1 ₃   1 ₄   1 ₄	freq:          km         kj = 0.98         k2 = 1.00         k3 = 1.03         kpicle Factor           freq:         l3/4 s         (m/m)         (m/m) </td <td>  Freq.   48   (Eq.   1, 0)   Feetor   1, 0   Feetor   1, 0   Feetor   1, 0   Freq.   48   (Eq.   1, 0)   Feetor   1, 0   Freq.   48   (Eq.   1, 0)   Feetor   1, 0   Freq.   48   (Eq.   1, 0)   Feetor   1, 0   Feetor   1,</td> <td>  10.20</td> <td>  Freq.   1, 8   Eq.   1, 9   1, 9   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1</td>	Freq.   48   (Eq.   1, 0)   Feetor   1, 0   Feetor   1, 0   Feetor   1, 0   Freq.   48   (Eq.   1, 0)   Feetor   1, 0   Freq.   48   (Eq.   1, 0)   Feetor   1, 0   Freq.   48   (Eq.   1, 0)   Feetor   1, 0   Feetor   1,	10.20	Freq.   1, 8   Eq.   1, 9   1, 9   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1, 10   1

			HEL	I COP	TER	CAL.			<b></b> •	В	ENCH	MARK			 ROUT	NE	X		
				OP HE					ft.	) 1	RIPO	00 _		. H	OPTE				
			(At	oove	38X)	<b>888</b>	S.L.	)	·	<b>-</b>			<b>.</b>		 ł ——	<del></del>			 _
1979		ctor	Erd/la (Units)	2.066	2.071		2.828	2.837		2.437	2.449		2.355	2.404	2.476	2.479			
DATE: 27 MAY 1979	1 . 03	Vehicle Factor	Rr (Ohm)	0.0474	0.0476		0.0889	0.0894		0.0660	0.0666		0.0616	0.0642	0.0681	0.0683			1
٥	۱۱ چ		) (m)	161	162		165	166		171	172		170	173	167	167			
050-40	00 . 1	Loop Factor	Pr (kW)	7.3	7.3		13.7	13.7		10.1	10.2		9.5	9.6	10.5	10.5			·
Ì	K, =		Er (mV/m)	20.7	20.8		28.2	28.5		24.4	24.7		23.5	24.2	24.7	24.8			7
SITE NUMBER:	96 . 0	$\sim$	Em (mV/m)	20.8	20.9		28.3	28.6		24.5	24.8		23.7	24.3	24.8	24.9			4
	2	1	-(W)	392															1
HAWA! I	km.,		Eq. (my)	20.2	20.3		27.5	27.8		23.8	24.1		23.0	23.6	24.1	24.2			
	•		1 d S	400															
OMEGA STATION:	Distance:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05		11.80				
OME G	Dist	(1f.	Dist. (km.)	39,2	39,1		39,3	39,0	•	39.2	38.9	·	39.2	39.0	39,3	39.2		•	

		L00	P HE	TER C	20			_ ft.)	Т	RIPO				- ELIC(	OUTI:	_	X	<del></del>	
		(Ab	ove	XXXX	<b>300</b> /	S.L.	) H	e 1 gn	t -	Gain	mea	sure	nen t.					-	
28 MAY 1979	ctor	Erd/la (Units)	2.289	2.272		2.936	2.963		2.470	2.498		2.376	2.411		2.604	2.622			
DATE: 28 MA	) . 03 Vehicle Factor	Rr (Ohir)	0.0582	0.0574		0.0958	0.0975		0.0678	0.0693		0.0628	0.0646		0.0753	0.0764			
70	<del>بر</del> ۱۱	he (m)	179	177		172	173		173	175		171	174		176	177			
120-20	1 . 00 Loop Factor	Pr (KW)	8.9	8.8		14.7	15.0		10.4	10.7		9.6	6.9		11.6	11.7			
1	K2 = 1	Er (mV/m)	40.6	40.3		52.1	52.8		43.8	44.5		42.2	42.8		46.4	46.5			
SITE NUMBER:	0 . 98 a ⁷ las	Ε _Μ (mV/m)	41.5	41.2		52.7	53.5		44.6	45.3		43.0	43.6		47.2	47.3			
	κ ₁ = 1	-[A]	392																
HAWAII	₽	Eg (mV)	40.3	40.0		51.2	51.9		43.3	44.0		41.7	42.3		45.8	45.9			
		18 (A)	400																
OMEGA STATION:	Distance: (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OMEGA	Distance: (If const	Dist. (km.)	22.1	22.1	•	22.1	22.0		22.1	22.0		22.1	22.1	٠	22.0	22.1	٠	•	•

		HEL.	I COP	TER (	CAL.			_•	В	NCH	1ARK			_ F	ROUTI	NE _	X		
			P HE					ft.)	T	RIPO	D		H	ELIC	OPTER	!	Х		
		( Ab	ove	XXXX	XXX /	S.L.	)		L		4								
1978	ctor	Erd/Ia (Units)	2.267	2.262		2.915	2.928		2.452	2.458		2.382	2.394		2.619	2.610			
DATE: 28 MAY 1978	l . 03 Vehicle Factor	Rr (Ohn:)	0.0571	0.0568		0.0944	0.0953		0.0668	0.0671		0.0631	0.0637		0.0762	0.0757			
ā	3	he (m)	177	176		171	171		172	173		172	172		177	176			
120-20	1 . 00 Loop Factor	Pr (kW)	8.8	8.7		14.5	14.6		10.3	10.3		9.7	9.8		11.7	11.6			
-	K ₂ = Lool	Er (mV/m)	40.4	40.3		52.2	52.2		43.9	43.8		42.6	42.7		47.1	46.5			
SITE NUMBER:	0 . 98 la/las	Ε _m (mV/m)	41.3	41.2		52.8	52.8		44.7	44.6		43.5	43.5		47.9	47.3			
	κ ₁ = 1	(V)	392																
HAWAII	km.,	Eq.	40.1	40.0		51.3	51.3		43.4	43.3		42.2	42.2		46.5	45.9			
		1 (A)	400																
OMEGA STATION:	Distance: (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OMEGA	Distance: (If const	Dist. (km.)	22.0	22.0		21.9	22.0	٠	21.9	22.0	•	21.9	22.0		21.8	22.0		٠	

	HEL	I COP	TER (	CAL.			<b>_</b> ·	В	ENCH	1ARK			_ F	ROUTI	NE _	X		
	L00	P HE	IGHT	1	000	()h./	ft.)	T	RIPO	D		Н	ELIC	OPTER	!	X		
	(Ab	ove	<b>BXXX</b>	ace/	S.L.	)					· —			١		<del></del>		,
tor	Erd/la (Units)	2.299	2.305		2.961	2.955		2.467	2.484		2.414	2.427		2.579	2.598			
Vehicle Fac	Rr (Ohn)	0.0587	0.0590		0.0974	0.0970		0.0676	0.0685		0.0647	0.0654		0.0739	0.0750			
В	he (m)	179	180		173	173		173	174		174	175		174	175			
Factor	Pr (kW)	9.0	9.1		15.0	14.9		10.4	10.5		6.6	10.1		11.4	11.5			
If	Er (mV/m)	36.3	36.4		46.8	46.7		39.0	39.1		38.2	38.4		40.8	41.1			
/Ia	Ε _m (mV/m)	37.0	37.1		47.3	47.2		39.6	39.7		38.7	38.9		41.3	41.6			
"	I _A (A)	392																
E	(mV)	35.9	36.0		45.9	45.8		38.4	38.5		37.6	37.8		40.1	40.4			
	1 a §	400																
onstant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
Ulsta (If c	Dist. (km.)	24.8	24.8	•	24.8	24.8	•	24.8	24.9		24.8	24.8		24.8	24,8	•		·
	Distance: $K_1 = 0.98$ $K_2 = 1.00$ $K_3 = 1.03$ (If constant) $K_1 = 1$ $K_2 = 1.00$ Factor $K_3 = 1.03$	tance:	tance:	tance:	tance:	Freq. I as Eq. (mV) (MV/m) (MV/m) (KW) (M) (Mn) (Mn) (Mn) (Mn) (Mn) (Mn) (Mn)	tance:	constant)  Loop Factor  Loop Rath  Loop Factor  Loop Fact	Constant)  Freq. 1a8 (mlV) (A) (mV/m) (mV/m) (kW) (M) (mlm) (0hm) (10 tits) (00 tits) (10 tits) (00 tits)	Constant)  Freq. 1as Eq. 1a (mV) (A) (mV/m) (mV/m) (KW) (M) (M) (M) (M) (M) (M) (M) (M) (M) (M	constant)  Freq. 138  Fred. 138  Freq. 138  Fred. 138  Freq. 138	Freq.   1 ₃   E ₁   1 ₃   1 ₄   E ₁   1 ₃   1 ₄   E ₁   1 ₃   1 ₄   1 ₄	The constant   Tay   T	Constant   Constant	Constant   Constant	constant) $(A) = \frac{1}{14} \frac{1}{148}$ $(A) = 1$	10.20   400   35.9   39.2   37.1   36.4   9.1   180   0.0587   2.299   Acordy   11.05   37.6   38.7   38.2   9.9   174   0.0686   2.467   11.80   40.1   41.3   41.8   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   40.8   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   41.5   4	10.20   40.0   35.9   39.2   37.0   86.3   9.0   179   0.0587   2.299   0.0587   1.000   11.05   11.05   38.4   38.5   39.7   38.7   38.4   10.5   17.5   0.0576   2.467   11.80   40.1   41.3   40.8   11.4   11.5   175   0.0750   2.598   38.1   40.4   40.4   41.6   41.1   11.5   175   0.0750   2.598   38.1   38.4   41.6   41.1   11.5   175   0.0750   2.598   38.1   38.4   41.6   41.1   11.5   175   0.0750   2.598   38.1   38.1   38.4   38.4   38.4   38.4   38.4   38.5   38.4   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   38.5   3

		HEL	COP1	rer (	CAL.			_•	BE	NCHM	IARK			_ F	I TUO	NE _	X		
		L00	P HE	IGHT	1	000	(m./	ft.)	T	RIPO	<u> </u>		Н	ELIC	OPTER		X_		
		(Ab	ove	XXXX	XXX\	S.L.	)							4					
ļ	tor	Erd/la (Units)	2.266	2.235	2.282	2.922	2.907	2.936	2.396	2.350	2.404	2.372	2.286	2.325	2.508	2.477	2.476		
1 . 03	Vehicle Fac	Rr (Ohr)	0.0571	0.0555	0.0579	0.0949	0.0939	0.0958	0.0638	0.0613	0.0642	0.0625	0.0581	0.0601	0.0699	0.0682	0.0681		
11		رس) (m)	177	174	178	171	170	172	168	165	169	171	165	167	169	167	167		
00	Factor	Pr (KW)	8.8	8.5	8.9	14.6	14.4	14.7	9.8	9.4	6.6	9.6	8.9	9.2	10.7	10.5	10.5		
11		Er (mV/m)	29.5	29.1	29.8	38.1	37.9	38.4	31.3	30.6	31.4	31.0	29.9	30.5	32.8	32.3	32.4		
98 . 0	a/Ias	Ε _m (mV/m)	29.9	29.5	30.2	38.3	38.1	38.6	31.6	30.9	31.7	31.3	30.2	30.8	33.1	32.5	32.7		
"	_	I. (A)	392																
Ĕ.		Eg (mV)	29.0	28.6	29.3	37.2	37.0	37.5	30.7	30.0	30.8	30.4	29.3	29.9	32.1	31.6	31.7		
		1 (A)	400																
ince:	constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
Dista	(1f c	Dist. (km.)	30.1	30.1	30.0	30.1	30.1	30.0	30.0	30.1	30.0	30.0	30.0	29.9	30.0	30.1	30 0	٠	
	$K_1 = 0.98  K_2 = 1.00  K_3 = 1.00  K_4 = 1.00  K_5	ant) km., $K_1 = \frac{0.98}{I_a/I_{as}}$ $K_2 = \frac{1.00}{I_{oop}}$ $K_3 = \frac{1}{V_{ehicle}}$	itance:	Freq.   I _a   E _a   I _a   I _a   E _a   I _a	Freq.   Ias   Eq.   Ias   (mV/m)   (mV/m)   (mV/m)   (kW)   (mV/m)   (mV/m)   (kW)   (mV/m)   (mV/m)   (mV/m)   (kW)   (mV/m)   (kW)   (mV/m)   (kW)   (mV/m)   (kW)   (mV/m)   (kW)   (mV/m)   (mV/m)   (kW)   (kW)   (mV/m)   (kW)   (mV/m)   (kW)   (mV/m)   (kW)   (kW)   (mV/m)   (kW)   (mV/m)   (kW)   (kW)   (mV/m)   (kW)   (mV/m)   (kW)   (mV/m)   (kW)   (kW)   (mV/m)   (kW)   (kW)	Freq.   I _a   E _a   I _a   E _a   I _a   E _a   I _a   I _a   E _a   I _a	Freq.   I ₃   E   Freq.   I ₄   E   E   I ₄   E   E   E   E   E   E   E   E   E	Freq.   I ₄ S   E ₄   I ₄ S   E ₄   I ₄ S   E ₄   I ₄ S   I ₄ S	Freq.   I _a   E _q   (mV)   (A)   (mV/m)   (KW)   (KW)   (M)   (KW)   (KW)	Freq.   I ₃   E _q   I ₃   E _q   I ₄   E _{rd}   I ₄   I ₄	Freq.   I ₃   E _q   I ₄   E _m   E _m   E _m   E _m   I ₄   E _m   I ₄   E _m   I ₄   I ₄	Freq.   13   Eq.	Freq.   A	Freq.   A   A   A   A   A   A   A   A   A	Freq.   A	Freq.   18   Factor   19   Factor   10   10   Factor   1	Freq. Freq. [4] [4] [6] [7] [7] [7] [7] [8] [7] [7] [8] [7] [8] [8] [7] [8] [8] [8] [8] [8] [8] [8] [8] [8] [8	The constant   The	Constant   Constant

		HEL	I COP	TER (	CAL.				8.2	<b>\</b> J=M	ΑЗК			<b>.</b>	ا ۽ " اِ	LE _	X		
		F00	P HE	IGHT	.10	5Ç .	( <b>x</b> ./	ft.)	7 ;	RIPO	1	🚙 -	. r <u>.</u> E	.110	JPTER		<u> X</u>		
		( At	o ve	SEFI	ace '		) <del>-</del>				1							<b>.</b>	
1979	ctor	Erd/la (Units)	2.306	52.56		3.02%	C.)		2.445				2.430		2.494	2.494		,	1
DATE: 28 MAY 1979	1 . 03 Vehicle Factor	Rr (Other)	0.0591	3,0583						1226.5		0.0653	0.0656		0.0691	0.0691			
VO	, 3 3	a E	180	6/1								17.4	175		168	168	-		
120-35	l . 00 Loop Factor	Pr (KW)	6.1	0.0		1.5.7			10.7	c :		10.0	10.1		10.6	10.6			
	K2 = Loop	Er (mV/m)	25.3	25.7	* * * * * * * * * * * * * * * * * * *		3.5						27.3		27.9	27.9			
SITE NUMBER:	0 . 98 la/las	Em (πV/m)	26.1	36.0		다.	0.50		4 6.7			₹. \$2.	27.6		78.1	28.1			
:	K ₁ =	-55	3	!														,	
HAWAII	km.	ξ _q (mγ)	26.3				37.3		3.2	26.5		26.6	26.7		27.3	27.3			
		138 (A)	130						-										
OMEGA STATION:	Distance: (If constant)	Freq. (kHz)	10.26			1.5 %	1		11-173			11.65			11.80				-
OMEGA	Distance: (If const	Dist. (km.)	o. a.c.			٠,				6.1		о ::	24.9		35.0	35.0	٠	٠	
			<b></b>	<b></b>	<del></del>	<b>+</b>	<b></b>	<b>.</b>	<b>†</b>	·		<b>*</b>					_		

		HEL	COPT	ER C	CAL.			<b>~•</b>	88	NCHN	1ARK			. F	:ITUO	NE _	X		
		٤00	P HE	IGHT	_1	000	(m./	ft.)	T	RIPO	۵		н	ELIC	OPTER	!	Χ_		
						S.L.					4			4				L	
1979	tor	Erd/la (Units)	2.220	2.204		3.064	3.061		2.498	2.504		2.493	2.525		2.473	2.463			
DATE: 28 MAY 1979	l . 03 Vehicle Factor	Rr (Ohn)	0.0548	0.0540		0.1043	0.1041		0.0693	0.0697		0.0690	0.0708		0.0680	0.0674			
6	ж 3	he (m)	173	172		179	179		175	176		180	182		167	166			
120-40	1 . 00 Loop Factor	Pr (KW)	8.4	8.3		16.0	16.0		10.7	10.7		10.6	10.9		10.4	10.4			
MBER: 1	K2 = Loop	Er (mV/m)	21.5	21.3		29.7	29.6		24.2	24.2		24.1	24.4		23.9	23.8			
SITE NUMBER:	98 . 0 I _a /I _{as}	Ε _m (mV/m)	21.6	21.4		29.8	29.7		24.3	24.3		24.2	24.5		24.0	23.9			
	K1 =	- <del>(</del> 4)	392																
HAWAII	km.	Eq. (mg)	21.0	20.8		28.9	28.8		23.6	23.6		23.5	23.8		23.3	23.2			
		198 (A)	400																
OMEGA STATION:	Distance: (1f constant)	Freq. (KHZ)	10.20			13.60			11-1/3			11.05			11.80				
OMEGA	Distance: (1f const	Dist. (km.)	40.5	40.6		40.5	40.6		40.5	40.6		40.6	40.6		40.6	40.6	·		·

### DATA SHEET 6 (05-6), REV 1 FADIO (TELD INTENSITY CALCULATION)

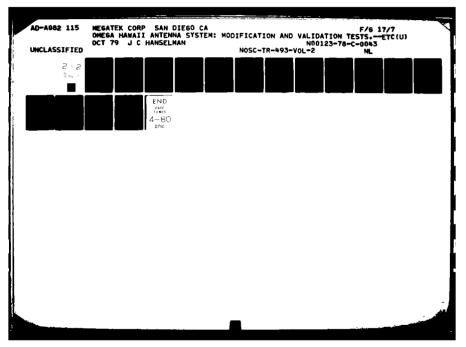
				1001											-			у	· _	
			L00	)P HE 5일VP <del></del> /	1621 1482	. –	_	ont.	ft.;		£ (			·•	= +	;		X _		
1979			Erd/la (Units)	2.197	2.SP4			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			· · · · · · · · · · · · · · · · · · ·			33.4		2,477	₹.			
DATE: 28 MAY 1979	1 . 03	אַבּװוּכוּה אַ	Rr ((thic)	0.0536	0.0542					à l				9190		. 0.06e2	0.0679	1		
70	, K		e E	171	17:		A	er Kog		<u>.</u>						167	167	1		
180-20	1 00	ו פר נטנ	Pr (KW)	8.2	cr (		धर स्व	Str.			e. G			ć ;		∍.01	10.4			
	K2 = 1	1001	Er (mV/m)	43.5	43.5			· · · · · · · · · · · · · · · · · · ·			• •		-	: - ! 		49.0	48.9			
SITE NUMBER:	98 . 0	,a, ,as	£m (mV/m)	44.7	14.7		¥ 7 5	ur un		j at	9		,			T * (16)	5.0	1		
	K ₁ =	•	(A)	3.05						1				<del>1</del>	-					
HAWAII	km.		Eq. (mg)		e:• ::-			8.36			-					\$ * \delta \text{\$\frac{1}{2} \text{\$\frac{1} \text{\$\frac{1}{2} \text{\$\frac{1}{2} \text{\$\frac{1}{2} \text{\$\frac{1}{2} \text		!		
			13 (A)			<b>!</b>				:			- <b>-</b> : !							
OMEGA STATION:	nce:	(If constant)	Freq. (kHz)	10.20		-			į	11-1		-				= ·				
OMEGA	Distance:	0 1	Dist. (km.)	e 'c'.	· 3			CT					-			a ² 61	8 61	٠		
				ii		L	J	l <u></u>		<b></b>		L I	ئــا يا	الحـــ			·	-	-	

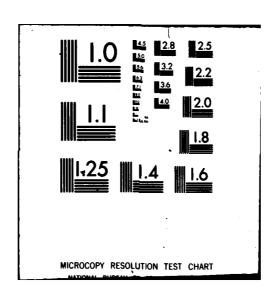
			HEL!	COPT	ER C	AL.			_•	88	INCHN	IARK			_ F	ROUTI	NE _	Х		
				P HE					ft.)	T	RIPO	D		Н	ELIC	OPTER		X		
			(Ab	ove	XXXX	<u>*88</u> /	S.L.	<u>)                                    </u>	1		<del></del>		<del></del>		1					
y 1979		ctor	Erd/I _a (Units)	2.212	2.212	2.228	2.941	2.928	2.941	2.393	2.390	2.387	2.372	2.343	2.372	2.457	2.445	2.480		
DATE: 28 MAY 1979	1 . 03	Vehicle Factor	Rr (Ohr)	0.0544	0.0544	0.0551	0.0961	0.0953	0.0961	0.0636	0.0635	0.0633	0.0625	0.0610	0.0625	0.0671	0.0664	0.0683		
0	م		he (m)	173	173	174	172	171	172	168	168	168	171	169	171	166	165	167		
180-25	1 . 00	) Factor	Pr (kW)	8.4	8.4	8.5	14.8	14.6	14.8	9.8	9.8	9.7	9.6	9.4	9.6	10.3	10.2	10.5		
j	K2 =		Er (mV/m)	34.8	34.8	34.9	46.3	46.1	46.3	37.7	37.5	37.6	37.3	36.7	37.3	38.8	38.3	39.0		
SITE NUMBER:	96 . 0	a/las	Ε _m (mV/m)	35.4	35.4	35.5	46.8	46.6	46.8	38.2	38.0	38.1	37.9	37.3	37.9	39.3	38.8	39.6		
	K ₁ =	<b>-</b>	(A)	392																
HAWAII	ka		Eg (mV)	34.4	34.4	34.5	42.4	45.2	45.4	37.1	36.9	37.0	36.8	36.2	36.8	38.2	37.7	38.4		
	•		1 _d 3 (A)	400																
OMEGA STATION:	nce:	(If constant)	Freq. (KHZ)	10.20			13.60			11-1/3			11.05			11.80				
OMEGA	Distance:	(1f c	Dist. (km.)	24.9	24.9	25.0	24.9	24.9	24.9	24.9	25.0	24.9	24.9	25.0	24.9	24.8	25.0	24.9	•	

		HEL LOC	1009 1009	TER ( IGHT		 -(j)		 ft )		-, ; . <b>.</b> F.: PO				-	GUT: DRTER	-	<u>х</u>		
		(At	oove.	FALE	arej		,	4			4		- ·					<b></b> -	
28 MAY 1979	ctor	Erd/la (Units)	2.17.	2.186	2.197	166.5	2.964	7.979	\$\$\$.	436	2,463	0.1 b	2,436	2.411	2.470	2.470	2.469		
DATE: 28 MAY	1 03 Vehicle Factor	Rr (Oher)	0.0524	0,0530	. 24		376016	0,09a.f	0,0664	9,0669	0.0677	0.0650	0.0659	0.0646	0.0678	0.0678	0.0677		ı
/0	Ж 3 =	1. (E)	160		-			1/::	1	1.7	1/1	17.2	17".	17.1	167	167	167		
180-30	1 00 Loop Factor	(M)	1		-			- 			10.	10.	10.1	9.0	10.4	10.4	10.4		
NUMBER: 1	K2 = 1	(mV/m)	1 2 2				***************************************	i.				****	4	31.4	32.1	32.1	32.2		
_ SITE NU	0 . 98 a las	ξ _m (mV/m)				~	· · ·					***		. i .	12.3	32.3	32.4		
1	1 X	- (K)					•					 							
HAWA! I	ka.	(Pat)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							~ .			5.17	36.	31.4	1.4	31.5		
	•	I ds	100							- 4 1									
OMEGA STATION:	Distance: (If constant)	Freq. (kHz)	- 2. G				 İ			:					11.80				
OMEGA	Distance: (1f const	Dist. (km.)	(c)	· · ·							- 1		÷ .	1.0	30.2	33.2	30,1		•

			L0(	ICOP OP HE	IGHT	1	000					 		ROUTI OPTEI				
28 MAY 1979		ctor	Erd/Ia (Units)	2.145	2.142		2.543	2.942	2.482	2.480		2.426	2.424	2.519	2.530			
DATE: 28 MA	1 . 03	Vehicle Factor	Rr (Ohn)	0.0511	0.0510		0.0962	0.0961	0.0685	0.0684		0.0654	0.0653	0.0705	0.0711			
0	κ,		he (m)	167	167		172	172	174	174		175	175	170	171			
180-35	00 ، ١	Loop Factor	Pr (kW)	7.9	7.8		14.8	14.8	10.5	10.5		10.0	10.0	10.8	10.9			
SITE NUMBER:	K ₂ =		Er (mV/m)	23.7	23.6		32.5	32.4	27.4	27.3		26.8	26.7	27.7	27.9			
SITE	96 . 0	la/ Ias	Εη (mV/m)	23.9	23.8		32.7	32.5	27.6	27.5		27.0	26.9	27.9	28.1			
		•	1 (A)	368														
HAWA! I	km.,		Eg (mV)	23.2	23.1		31.7	31.6	26.8	26.7		2.92	26.1	27.1	27.3			
	•	•	Igs (A)	400														
OMEGA STATION:	Distance:	(If constant)	Freq. (kHz)	10.20			13.60		11-1/3			11.05		11.80				
OME G	Dista	(16.	Dist. (km.)	35.5	35.6	·	35.5	35.6	35.5	35.6	٠	35.5	35.6	35.6	35.5	·	•	

Properties	N N N N N N N N N N N N N N N N N N N
Co.5   7.6   164   0.0499   2.104   0.045   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   0.0499   2.104   2.104   0.0499   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104   2.104	
20.5 7.6 164 7.0499 2.119 2.056 3.0499 2.119 2.056 3.0499 2.119 2.056 3.0499 2.119 2.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3.056 3	(A) (Pi) (A)
24.7 10.6 10.9 2.113 10.6 10.0499 2.113 10.6 10.0499 2.113 10.6 10.0499 2.113 10.6 10.0499 2.113 10.0672 2.342 2.342 2.343 10.0672 2.343 2.343 10.0673 2.343 2.343 10.0673 2.343 2.343 10.0673 2.343 2.343 10.0673 2.343 2.343 10.0673 2.343 2.343 10.0673 2.343 2.343 10.0673 2.343 10.0673 2.343 10.0673 2.343 10.0673 10.0734 2.383 10.0734 2.383 10.0734 2.383 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.0734 10.	
27.7. 12.5 16.7 9.90m 2.34; 2.34; 2.34; 2.34; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.44; 3.	
22.7	
24.0 10.6 176 0.0906 2.007 24.0 10.6 175 0.0679 2.007 24.0 10.4 173 0.0672 2.007 25.0 9.6 171 0.0677 2.075 25.1 11.4 175 0.0744 2.588	
24.0 10.6 175 0.0679 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.307 2.3	
24.7 10.6 176 0.0690 2.397 24.0 10.4 173 0.0672 2.375 2.0 4.6 174 0.0738 2.377 25.1 11.4 175 0.0744 2.588	
24.0 10.4 173 0.0678 2.479 25 25 25 25 25 25 25 25 25 25 25 25 25	
2.6 9.6 171 0.0627 2.375 25 25 25 25 25 25 25 25 25 25 25 25 25	
25.0 3.6 17.1 0.0627 2.375 25.0 25.0 25.0 25.0 25.0 25.0 25.0 25.	-
25.0 11.3 124 0.0738 2.577 2.378 2.577 2.378 2.577 2.378 2.577 2.378 2.577 2.378 2.577 2.588 2.577 2.588 2.577 2.588 2.578 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.588 2.5	
25.10 11.3 174 0.0738 2.5577 2.5578 2.5577 2.588 3.55.11 11.4 175 0.0744 2.588	
25.0 11.3 174 0.0738 2.577 2.587 2.587 2.588 2.588 2.588 2.588	
25.1 11.4 175 0.0744 2.588	· k





			HEL	COPT	ER C	AL.				BE	NCHM	IARK			. R	OUTI	NE _	<u> </u>		
			L00	P HE	IGHT	400	00_	(¥./·	ft.)	Ţ	RIPO	o		HI	ELIC	OPTER		X		
			(Ab	ove	KKKE	1/28/E	S.L.	) _	4			4								
1979		tor	Erd/la (Units)	2.231	2.227	2.247	2.909	2.885	2.913	2.425	2.449	2.441	2.386	2.369	2.385	2.555	2.558	2.552		
DATE: 25 MAY 1979	1 . 03	Vehicle Factor	Rr (Ohn')	0.0553	0.0551	0.0561	0.0941	0.0925	0.0943	0.0654	0.0667	0.0662	0.0633	0.0624	0.0632	0.0725	0.0727	0.0723		
ă	۲ م ا		h (m)	174	174	175	170	169	170	170	172	171	172	171	172	172	172	172		
265-20	1 . 00	Factor	Pr (KW)	8.5	8.5	8.6	14.5	14.2	14.5	10.0	10.2	10.2	6.7	9.6	9.7	11.1	11.2	11.1		
1	K2 = 1		Er (mV/m)	42.9	42.4	43.2	55.6	54.6	55.4	46.6	45.9	46.2	45.8	44.9	45.2	49.1	48.9	48.3		
SITE NUMBER:	8	l _a /l _{as}	Em (mV/m)	44.0	43.5	44.3	56.4	55.4	56.2	47.6	46.9	47.2	46.9	45.8	46.1	50.1	49.9	49.2		
	**		(A)	392																
HAWAII	ķ.	}	Eg (mV)	42.7	42.2	43.0	54.8	53.8	54.6	46.2	45.5	45.8	45.5	44.5	44.8	48.6	48.4	47.8		
	•		1 (A)	400																
OMEGA STATION:	nce:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OMEGA	Distance:	(1f c	Dist. (km.)	20.4	20.6	20.4	20.5	20.7	20.6	20.4	20.9	20.7	20.4	20.7	20.7	20.4	20.5	20.7	•	
			L	<u> </u>	L				<b>!</b>	<b> </b>	<u> </u>				L	)				<u>.                                    </u>

The second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of th

			HELI	COPT	ER C	AL.			<b>.</b> •	BE	NCHM	ARK			R	OUTI	IE _	X	
				P HE					ft.)	T	RIPO	·		HE	LICO	PTER		X	
		1	(Ab	ove	XXXX	<b>3</b> 00/	S.L.	) 				1	-1		-1				
MAY 1979		ctor	Erd/la (Units)	2.320	2.299	2.280	3.120	3.125	3.100	2.489	2.489	2.486	2.428	2.454	2.434	2.581	2.607	2.578	
DATE: 25 MAY	1 . 03	Vehicle Factor	Rr (Ohn)	0.0598	0.0587	0.0578	0.1082	0.1085	0.1068	0.0688	0.0688	0.0686	0.0655	0.0669	0.0658	0.0740	0.0755	0.0738	
3	K ₂ =		(m)	181	179	178	183	183	181	175	175	175	175	177	175	174	176	174	
265-25	1 . 00	o Factor	Pr (kW)	9.2	9.0	8.9	16.6	16.7	16.4	10.6	10.6	10.5	10.1	10.3	10.1	11.4	11.6	11.3	
1	K ₂ =		Er (mV/m)	35.7	35.1	35.1	48.2	47.7	47.7	38.4	38.1	38.2	37.5	37.6	37.3	39.7	40.1	39.5	
_ SITE NUMBER:	96 . 0	a/las	Ε _m (mV/m)	36.3	35.6	35.6	48.6	48.1	48.1	38.9	38.6	38.7	38.0	38.1	37.8	40.2	40.6	40.0	
	K1 =	•	-1 (A)	392															
HAWAII	km.,		Eq (mV)	35.2	34.6	34.6	47.2	46.7	46.7	37.8	37.5	37.6	36.9	37.0	36.7	39.0	39.4	38.3	
	•		18 (A)	400															
OMEGA STATION:	nce:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80			
OMEGA	Distance:	(If c	Dist. (km.)	25. 5	25,7	25.5	25.4	25.7	25.5	25.4	25.6	25.5	25.4	25.6	25.6	25.5	25.5	25.6	•

			HEL	I COP	TER (	CAL.			<b>~</b> •	88	ENCHI	1ARK			_	ROUTI	NE _	<u> </u>		
							00		ft.)	T	RIPO	_ م		Н	ELIC	OPTER	·	X		
			(At	ove	1XXI	RRR\	S.L.	)		L						L				
1979		ctor	Erd/la (Units)	2.126	2.147		2.825	2.843		2.341	2.332		2.308	2.291		2.375	2.375			
DATE: 25 MAY 1979	1 . 03	Vehicle Factor	Rr (Ohn:)	0.0502	0.0512		0.0887	0.0898		0.0609	0.0604		0.0592	0.0583		0.0627	0.0627			
a 	<del>بر</del> ء		ار (۳)	166	168		165	166		164	164		166	165		160	160			
265-30	1 . 00	) Factor	Pr (kW)	7.7	7.9		13.6	13.8		9.4	9.3		9.1	9.0		9.6	9.6			
,	K2 =		Er (mV/m)	26.9	26.9		35.7	35.7		29.7	29.4		29.4	28.9		30.5	30.0			
SITE NUMBER:	96 . 0	-	Ε <b>π</b> (mV/m)	27.2	27.2		35.9	35.9		30.0	29.7		29.7	29.1		30.8	30.3			
	K1 =		1 (A)	392																
HAWA! I	ka.		Eq (mV)	26.4	26.4		34.9	34.9		29.1	28.8		28.8	28.3		29.9	29.4			
	•		I.A.S.	400																
OMEGA STATION:	ince:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OMEGA	Distance:	(1f c	Dist. (km.)	31.0	31,3	•	31.0	31.2		30.9	31.1	•	30.8	31.1	•	30.5	31.0	•	•	•
							,												,	

			L0	.ICOP OP H! bove	E I GH	T _4	000		_• /ft.]			MARK DD			_	ROUT I	-	<u> </u>		
/ 1979		ctor	Erd/Ia (Units)	2.158	2.108		2.953	2.958		2.408	2.420		2.401	2.412		2.430	2.454			
DATE: 25 MAY 1979	1 . 03	Vehicle Factor	Rr (Ohn:)	0.0517	0.0494		0.0969	0.0972		0.0644	0.0651		0.0640	0.0646		0.0656	0.0669	-		
	<u>بر</u> ۱	•	he (m)	168	164		173	173		169	170		173	174		164	165			
265-35	1 . 00	Loop Factor	Pr (kW)	7.9	7.6		14.9	14.9		9.6	10.0		9.8	9.9		10.1	10.3			
- 1	<del>ر</del> "		Er (mV/m)	23.9	23.1		32.7	32.4		26.6	26.5		26.6	26.5		26.9	27.0			
SITE NUMBER:	96 . 0	la/las	Em (mV/m)	24.1	23.3		32.9	32.5		26.8	26.7		26.8	26.7		27.1	27.2			
	K ₁ =	ļ	-A	392																
HAWA!!	Ę.		(mV)	23.4	22.6		31.9	31.6		26.0	25.9		26.0	25.9		26.3	26.4		_	
	•		188 (A)	400																
OMEGA STATION:	Distance:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
79340	Dist	(11)	Dist. (km.)	35.4	35.8	·	35.4	35.8		35.5	35.8		35.4	35.7		35.4	35.6			

Distance   Man, K  = 0 . 98   K2 = 1 . 00   K3 = 1 . 03   K4   1979				HELI	COPT	ER C	AL.			.•	85	NCHM	ARK			R	OUTIN	E _	X		
Constant)  10.20 400 21.6 392 22.2 22.1 9.2 163 0.0601 2.326  11.05 400 23.4 392 22.6 22.6 9.4 167 0.0679 2.472  11.80 400 23.4 392 24.1 24.0 10.4 167 0.0679 2.472				L00	P HE	IGHT	400	00_	(m./1	ft.)	TF	RIPO	) <u> </u>		HE	LICO	PTER		X		
Constant: HAMAII SITE NUMBER: 265-40 DATE: 25 MAY constant:										•			4								
SA STATION: HAWAII SITE NUMBER: 265-40 DATE: constant)  CONSTANT  CONSTANT  CONSTANT  CONSTANT  CONSTANT  CONSTANT  CONSTANT  10.20 400	1979		tor	Erd/la (Units)							2.326			2.344			2.472			  -  -	
Can STATION: HAWAII SITE NUMBER: 265-40 D  Cancel:		1 . 03	Vehicle Fac	Rr (Ohn:)							0.0601			0.0611			0.0679				
SA STATION: HAWAII SITE NUMBER:  constant)  constant)  constant)  constant)  10.20 400 392	3	11	Í	he (m)							163			169			167				
Eance:  Constant)  Constant  In 20 400  In 392  In 20 400  In 392  In 393  In 3	265-40	. 00	Factor	Pr (kW)							9.2			9.4			10.4				
Ed STATION: HAWAII  constant)  freq. las	MBER:	$K_2 = \frac{1}{12}$	Loop	Er (mV/m)							22.1			22.6			24.0				
tance: km., K ₁ =	_ SITE NU	<b>∞</b>		Em (mV/m)							22.2			22.6			24.1				
GA STATION: HAW constant)  10.20 400 11.60 11.05 400 11.80 400		#		1 (A)	392						392			392			392				
GA STATION:  tance:  constant)  10.20 400  11.60  11.05 400  11.80 400	HAWAII	5		Eg (mV)							21.6			22.1			23.4				
Distance: (If constant) (If constant) (km.) (kHz) . 10.20 . 13.60 . 13.60 13.60	-	•		Las (A)	400						400			400			400				i
Dista Dista (1f c (1f c (1f c (1m.)	STATION	nce:	onstant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
	OPEGA	Dista	(1f c	Dist. (km.)	•	٠					41.2	٠	٠	40.6	•	•	40.4	•	٠	•	•

			HEL	I COP	TER (	CAL.			<b>_</b> •	88	NCH	<b>A</b> RK			- 5	ROUTII	VE _	<u> </u>		
							00		ft.)	T	RIPO	D	<del></del>	HI		OPTER		X		
			(At	ove	ZRXX	ARR\	S.L.	)		<b></b>			<del></del>			· ——	- <u>-</u>		<del></del>	
1979	j		Erd/la (Units)	2.109	2,109		2.973	2.973		2.505	2.500		2.384	2.428		2.551	2.547			
DATE: 26 MAY 1979	1 . 03		Rr (Ohn:)	0.0494	0.0494		0.0982	0.0982		0.0697	0.0694		0.0632	0.0655		0.0723	0.0721			
2	ж 3 "		e (E)	165	165		174	174		176	176		172	175		172	172			
265-35	1 000		Pr (kW)	7.6	7.6		15.1	15.1		10.7	10.7		9.7	10.1		11.1	11.1			
1	K2 = 100		Er (mV/m)	23.5	23.5		33.1	33.1		27.8	27.9		26.5	27.2		28.2	28.4			
SITE NUMBER:	96 0	S 0	Em (mV/m)	23.7	23.7		33.3	33.3		28.0	28.1		26.7	27.4		28.4	28.6			
	K1 =		(V)	392																
HAWA! I	5		Eg (m)	23.0	23.0		32.3	32.3		27.2	27.3		25.9	26.6		27.6	27.8			
	•		I AS	400																
OPEGA STATION:	ince:	(IT COMSTANT)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OFFICE	Distance:		Dist. (km.)	35.2	35.2	•	35.2	35.2		35.3	35.1	٠	35.3	35.0	•	35.4	35.1	٠	•	
														<u></u>		,				

		L00	ICOPI OP HE	IGHT	4			_• ft.)			-		_	ROUTI			
26 MAY 1979	tor	Erd/Ia (Units)	2.049	2.054		2.919	2.919		2.450	2.470	2.389	2.389			2.572		
DATE: 26 M	1 . 03 Vehicle Factor	Rr (Ohrr)	0.0467	0.0469		0.0947	0.0947		0.0667	0.0678	0.0634	0.0634			0.0735		
ا	ار س	he (m)	160	160		171	171		172	173	172	172			173		
265-40	1 00 Loop Factor	Pr (kM)	7.2	7.2		14.5	14.5		10.2	10.4	9.7	9.7			11.3		
	K2 = 1000	(mV/m)	20.8	20.9		29.6	29.6		24.9	25.1	24.3	24.3			26.1		
SITE NUMBER:	0 . 98 a/las	(mV/m)	20.9	21.0		29.8	29.8		25.0	25.2	24.4	24.4			26.3		
	Α. 	<u></u> €	392														
HAWA!!	; 5	Eg (mV)	20.3	20.4		28.9	28.9		24.3	24.5	23.7	23.7			25.5		
	.'		400														
OPEGA STATION:	Distance: (If constant)	Freq. (kHz)	10.20			13.60			11-1/3		11.05			11.80			
OFFGA	Distance: (If comst	Dist. (km.)	38.7	38.6		38.6	38.6		38.6	38.6	38.6	38.6	•		38.6	•	
									<b></b>		<b>-</b>			,			

			HELI	COPT	ER C	AL.			<b>_•</b>	BE	NCHM	ARK			R	11700	_	X		
				P HE					ft.)	ŢI	RIPO	·		HE	LICO	PTER		<u>X</u>	-	
			dA)	ove	SAXX.	<u> </u>	5.L. T	<del>)                                    </del>				1							- 1	
26 MAY 1979		ctor	Erd/la (Units)	2.117	2.137	2.170	2.878	2.883	2.897	2.397	2.398	2.385	2.342	2.336	2.338	2.485	2.497	2.547		
DATE: 26 MA	1 . 03	Vehicle factor	Rr (Ohn)	0.0498	0.0507	0.0523	0.0920	0.0924	0.0930	0.0638	0.0639	0.0632	0.0609	0.0606	0.0607	0.0686	0.0693	0.0721		
6	<del>ب</del> س		ار (۳)	165	167	169	168	169	169	168	168	167	169	168	168	168	168	172		
305-20	٦ . 00	. Factor	Pr (kW)	7.7	7.8	8.0	14.1	14.2	14.3	9.8	9.8	9.7	9.4	9.3	9.3	10.5	10.6	11.1		
1	K ₂ = 1		Er (mV/m)	43.2	43.6	43.9	59.1	58.9	59.1	49.2	48.7	48.7	48.3	47.4	47.7	51.3	50.7	50.9		
SITE NUMBER:	0 . 98	a/las	Em (mV/m)	44.5	44.9	45.1	0.09	59.8	60.0	50.4	49.9	49.9	49.5	48.6	48.9	52.4	51.8	52.0		
	K1 =		I (A)	392																
HAWA! I	E		Eg (mV)	43.2	43.6	43.8	58.3	58.1	28°3	48.9	48.4	48.4	48.1	47.2	47.5	50.9	50.3	50.5		
	. !		185 (A)	400													,			
OMEGA STATION:	nce:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OPEGA	Distance:	(If c	Dist. (km.)	19.2	19,2	19.4	19.1	19.2	19.2	19.1	19.3	19. 2	19.0	19. 3	19. 2	19.0	19.3	19.6		

		HEL	I COP1	TER C	CAL.			<b>.</b> •	BE	NCHN	IARK			R	OUTI	IE _	X		
			P HE				(前./	ft.)	T	RIPO	D		H	ELIC	OPTER		<u> </u>		
		(At	ove	ZAXX	X88/	S.L.	)	1										<del></del>	
V 1979	ctor	Erd/la (Units)	2.144	2.164	2.187	2.922	2.937	2.943	2.383	2.400	2.426	2.349	2.352	2.363	2.468	2.445	2.474		
DATE: 26 MAY	1 . 03 Vehicle Factor	Rr (Ohr:)	0.0511	0.0520	0.0532	0.0949	0.0958	0.0963	0.0631	0.0640	0.0654	0.0613	0.0615	0.0620	0.0677	0.0664	0.0680		
8	κ _{3 =} ,	₽Œ	167	169	171	171	172	172	167	168	170	169	169	170	166	165	167		
305-25	1 . 00 Loop Factor	Pr (KW)	7.8	8.0	8.2	14.6	14.7	14.8	9.7	9.8	10.0	9.4	9.4	9.5	10.4	10.2	10.5		
	K ₂ = - 1	Er (mV/m)	32.8	33.5	34.0	45.1	45.5	45.6	36.8	36.9	37.9	36.5	36.2	37.0	38.2	37.4	38.6		
SITE NUMBER:	0 . 98 la/las	Em (mV/m)	33.4	34.1	34.6	45.5	45.9	46.0	37.3	37.4	38.4	37.1	36.7	37.6	38.7	37.9	39.1		
	Kı "	- (A)	392																
HAWAII	5	Eg (mV)	32.4	33.1	33.6	44.2	44.6	44.7	36.2	36.3	37.3	36.0	35.6	36.5	37.6	36.8	38.0		
	.'.	Las (A)	400					; ;											
OMEGA STATION:	Distance: (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OMEGA	Distance: (If const	Dist. (km.)	25.6	25.3	25.2	25.4	25.3	25.1	25.4	25. 5	25. 1	25.2	25. 5	25.0	25.3	25.6	25.1	•	

			HEL	COP	TER (	CAL.	_		_•	BE	NCHN	IARK	•		_ F	ROUTII	NE _	X		
				P HE					ft.)	T	RIPO	D		H	ELIC	OPTER		<u> </u>		
			(At	ove	30000	XXX/	S.L.	<u>)</u>		<b></b>			·	<del></del>					<b></b> -	
1979		ctor	Erd/la (Units)	2.059	2.034	2.059	2.879	2.838	2.852	2.371	2.303	2,333	2.331	2.270	2.278	2.434	2.358	2.374		
DATE: 26 MAY 1979	1 . 03	Vehicle Factor	Rr (Ohn)	0.0471	0.0460	0.0471	0.0921	0.0895	0.0904	0.0624	0.0589	0.0605	0.0604	0.0573	0.0577	0.0658	0.0618	0.0626		
ă	سم ا		he (m)	161	159	161	168	166	167	166	162	164	168	164	164	164	159	160		
305-30	1 . 00	p Factor	Pr (kW)	7.2	7.1	7.2	14.1	13.8	13.9	9.6	9.1	9.3	6.3	8.8	8.9	10.1	9.5	9.6		
}	K ₂ =		Er (mV/m)	27.4	26.8	27.3	38.3	37.3	37.6	31.6	30.3	30.8	31.1	30.0	30.1	32.4	31.2	31.2		
SITE NUMBER:	96 . 0	la/las	Ε _m (mV/m)	27.7	27.1	27.6	38.5	37.6	37.9	31.9	30.6	31.1	31.4	30.3	30.4	32.8	31.5	31.5		
	K1 =	-	-{\(\mathbe{A}\)	392																
HAWAII	<b>.</b>		Eg (mV)	26.9	26.3	26.8	37.4	36.5	36.8	31.0	29.7	30.2	30.5	29.4	29.5	31.8	30.6	30.6		
	•		Igs (A)	400																
OMEGA STATION:	ince:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
23.40	Distance:	(1f c	Dist. (km.)	29.5	29.8	29.6	29.5	8 62	29, 7	29.4	29.8	29,7	29.4	29. 7	29. 7	29.4	29.6	29.8	•	•

			HEL	COP	TER (	CAL.				BE	NCH	1ARK			_ F	ROUTI	NE _	<u> </u>		
			L00	P HE	IGHT	3	000	(n./	ft.)	Ŧ	RIPO	D		H	ELIC	OPTER		X		
			(Ab	ove	<b>BXXX</b>	XXX /	S.L.	)		<b>.</b>						L			<b>.</b>	
26 MAY 1979		ctor	Erd/Ia (Units)	2.084	2.072		2.866	2.857		2.426	2.424		2.357	2.352		2.467	2.472			
DATE: 26 M	1 . 03	Vehicle Factor	Rr (Ohr)	0.0483	0.0477		0.0913	0.0907		0.0654	0.0653		0.0617	0.0615		0.0676	0.0679			
0	π , ,		a E	163	162		168	167		170	170		170	169		166	167			
305-35	1 . 00	o Factor	Pr (KW)	7.4	7.3		14.0	13.9		10.0	10.0		9.5	9.4		10.4	10.4			
1	K2 =		Er (mV/m)	23.5	23.5		32.3	32.3		27.4	27.3		26.8	26.6		28.0	27.9			
SITE NUMBER:	96 . 0	la/las	Ε _η (mV/m)	23.7	23.7		32.4	32.4		27.6	27.5		27.0	26.8		28.2	28.1			
	K1 =		1 (A)	392																
HAWA!!	E		Eg (mV)	23.0	23.0		31.5	31.5		26.8	26.7		26.2	26.0		27.4	27.3			
			Igs (A)	400																
OMEGA STATION:	ince:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OMEGA	Distance:	(1f c	Dist. (km.)	34.8	34.6	٠	34.8	34.7		34.7	34.8		34.5	34.7	٠	34.5	34.7	٠	٠	

			HEL	I COP1	TER (	CAL.			_•	ВЕ	NCH	1ARK	ROUTINE X							
				P HE					ft.)	T	RIPO	D		H	ELIC	OPTER		_X		
			(Ab	ove	XXXX		S.L.	<u>)</u>			<del></del> -	1								
26 MAY 1979		ctor	Erd/Ia (Units)	2.035	2.046		2.789	2.792		2.406	2.437		2.362	2.327		2.546	2.518			
DATE: 26 MA	1 . 03	Vehicle Factor	Rr (Ohn·)	0.0460	0.0465		0.0864	0.0866		0.0643	0.0660	ļ	0.0620	0.0602		0.0720	0.0705			
0	_ل م =		he (m)	159	160		163	163		169	171		170	168		172	170			
305-40	١ . 00	5 Factor	Pr (KW)	7.1	7.1		13.3	13.3		9.6	10.1		9.5	9.2		11.1	10.8			
1	-	•	Er (mV/m)	19.7	20.1		27.2	27.3		23.5	23.8		23.1	22.6		24.7	24.5			
SITE NUMBER:	96 . 0	a/Ias	Εm (mV/m)	19.9	20.2		27.3	27.4		23.6	23.9		23.3	22.8		24.8	24.6			
	K ₁ =		1A (A)	392																
HAWA! I	km.		Eg (mV)	19.3	19.6		26.5	26.6		22.9	23.2		22.6	22.1		24.1	23.9			
	•		18 (A)	400																
OMEGA STATION:	nce:	(If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OMEGA	Distance:	(If c	Dist. (km.)	40. 4	40.0	٠	40, 2	40.1		40-2	40-2	•	40-0	40.3		40.4	40.3			

HELICOPTER CAL. ____ BENCHMARK __X ROUTINE _____

			P HE				(nk. /	ft.)	Ţ	RIPO	· _	X	н	LIC	PTER				
		(Ab	ove :	Surfa	ce/	SXK.	)		<del></del> -		1			-1			ī	<b></b>	
1979	ctor	Erd/la (Units)	2.559	2.565	2.549	3.413	3.364	3.326	2.776	2.787	2.776	2.714	2.741	2.730	2.943	2.927	2.938		
DATE: 31 MAY 1979	1 . 00 Vehicle Factor	Rr (Ohrr)	0.0728	0.0731	0.0722	0.1294	0.1257	0.1229	0.0856	0.0863	0.0856	0.0818	0.0835	0.0828	0.0962	0.0952	0.0959		
6	<del>بر</del> ۳	h (m)	200	200	199	200	197	195	195	196	195	195	197	197	198	197	198		
A	0 . 99 Loop Factor	Pr (KW)	11.2	11.2	11.1	19.9	19.3	18.9	13.2	13.3	13.2	12.6	12.8	12.7	14.8	14.6	14.7		
MBER:	K2 = Coop	Er (mV/m)	45.9	46.0	45.7	61.2	60.3	59.6	49.8	50.0	49.8	48.7	49.1	48.9	52.8	52.5	52.7		
SITE NUMBER:	0 98 a/las	Ε _η (mV/m)	46.9	47.0	46.7	62.0	61.1	60.4	50.7	50.9	50.7	49.6	50.1	49.9	53.7	53.4	53.6		
	K1 = _1		392																
AWA! 1	865 km.,	Eq (my)	47.4	47.5	47.2	62.6	61.7	61.0	51.2	51.4	51.2	50.1	50.6	50.4	54.2	53.9	54.1		
	8	las (A)	400																
OMEGA STATION:	Distance: 21 (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OMEGA	Distance: (If const	Dist. (km.)	•	٠	•	•	•	•			٠			•					•
						•		ne e	•					,	<del>,</del>				

			I COP					<b>_•</b>		ENCH			X	-	ROUTII	_		
			P HE				(m./ )	ft.)	T	RIPO	D	<u>X</u>	Н	ELIC	OPTER			
1979	ctor	Erd/la (Units)	2.410	2.415	2.410	3.221	3.221	3.221	2.636	2.631	2.636	2.579	2.579	2.579	2.796	2.786	2.791	
DATE: 31 MAY 1979	1 . 00 Vehicle Factor	Rr (Ohn:)	0.0645	0.0648	0.0645	0.1153	0.1153	0.1153	0.0772	0.0769	0.0772	0.0739	0.0739	0.0739	0.0868	0.0862	0.0865	
0	₹ 3	he (m)	188	188	188	188	188	188	185	185	185	186	186	186	189	188	188	
8	0 . 99 Loop Factor	Pr (kW)	6.6	10.0	9.9	17.7	17.7	17.7	11.9	11.8	11.9	11.4	11.4	11.4	13.3	13.3	13.3	
JMBER:	K ₂ = (	Er (mV/m)	46.8	46.9	46.8	62.5	62.5	62.5	51.2	51.1	51.2	50.1	50.1	50.1	54.3	54.1	54.2	
SITE NUMBER:	0 98 la/las	ξ _m (mV/m)	48.0	48.1	48.0	63.5	63.5	63.5	52.3	52.2	52.3	51.2	51.2	51.2	55.3	55.1	55.2	
	۲ ₁ =	(A)	392															
HAWAII	197 km.,	Eg)	48.5	48.6	48.5	64.1	64.1	64.1	52.8	52.7	52.8	51.7	51.7	51.7	55.9	55.7	55.8	
	20 . 1	18 (A)	400															
OMEGA STATION:	Distance:	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80			
79 <b>340</b>	Dista (1f	Dist. (km.)		•	٠	٠	•			٠	•	٠	•	٠		.		
					•									•				

		HEL	COPT	TER C	CAL.			_•	BE	NCHM	<b>I</b> ARK	_	X	_ F	OUTIN	IE _			
		L00	P HE	IGHT		6	(M./	ft.)	T	RIPO	٥	<u>X</u>	Н	ELIC	OPTER				
	(Above Surface/XXXX)																		
1979	ctor	Erd/la (Units)	2.170	2.170	2.164	3.015	2.996	3.002	2.431	2.412	2.412	2.379	2.385	2.366	2.510	2.516	2.510		
DATE: 1 JUNE 1979	1 . 00 Vehicle Factor	Rr (Ohn:)	0.0523	0.0523	0.0520	0.1010	0.0997	0.1001	0.0657	0.0646	0.0646	0.0629	0.0632	0.0622	0.0700	0.0703	0.0700		
ā	بر س	A (E)	169	169	169	176	175	176	171	169	169	171	172	170	169	170	169		
U	0 99 Loop Factor	Pr (kW)	8.0	8.0	8.0	15.5	15.3	15.4	10.1	9.9	6.6	7.6	9.7	9.6	10.8	10.8	10.8		
JMBER:	K2 = (00)	Er (mV/m)	33.4	33.4	33.3	46.4	46.1	46.2	37.4	37.1	37.1	36.6	36.7	36.4	38.6	38.7	38.6		
SITE NUMBER:	0 98 1 _a /1 _{as}	Em (mV/m)	34.0	34.0	33.9	46.8	46.5	46.6	37.9	37.6	37.6	37.1	37.2	36.9	39.1	39.2	39.1		
		[A]	392																
HAWAII	475 km.,	(MW)	34.3	34.3	34.2	47.3	47.0	47.1	38.3	38.0	38.0	37.5	37.6	37.3	39.5	39.6	39.5		
		1. (A)	400																
OMEGA STATION:	Distance: <u>25</u> (If constant)	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OMEGA	Distance: (If consta	Dist. (km.)		•	٠			٠			٠		•			·	•	٠	

		HELI	COPT	ER C	AL.			_•	BE	NCHM	<b>I</b> ARK		X	R	NITUO	IE _			
			P HE					ft.)	T	RIPO	D	<u>X</u>	HE	LICO	PTER			_	
	ı	(Ab	ove	Surf	ace/	XXXX	)		<del></del> -	<del></del> -		<del></del>							<del></del> 7
1979	ctor	Erd/la (Units)	2.164			2.996			2.412			2.360			2.516				
DATE: 1 JUNE 1979	1 . 00 Vehicle factor	Rr (Ohn)	0.0520			0.0997			0.0646			0.0619			0.0703				
6	χ ,	a (E)	169			175			169			170			170				
U	0 . 99 Loop Factor	Pr (KW)	8.0			15.3			6.6			9.5			10.8				
MBER:	K ₂ = (	Er (mV/m)	33.3			46.1			37.1			36.3			38.7				
SITE NUMBER:	0 . 98 a/las	Em (mV/m)	33.9			46.5			37.6			36.8			39.2				
	K1 = 1		392																
HAWA! I	475 km.	E ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (	34.2			47.0			38.0			37.2			39.6				
	52	1 A)	400																
OMEGA STATION:	ant	Freq. (kHz)	10.20			13.60			11-1/3			11.05			11.80				
OPEGA	Distance: (If const	Dist. (km.)		٠			•					·	•		·	•	•		٠